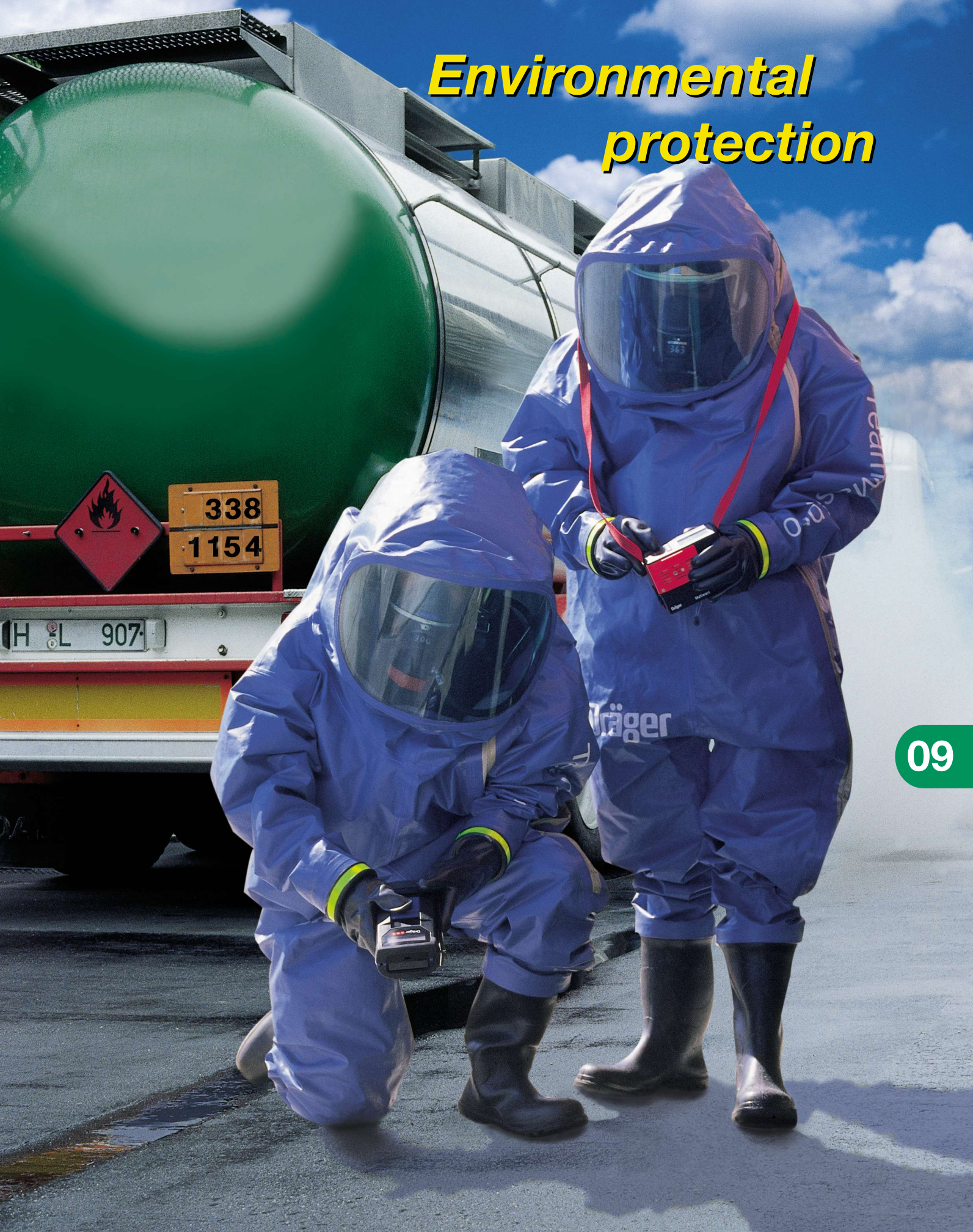




Liegler

Environmental protection





58728

DRÄGER chemical protective suit "TeamMaster pro"

Chemical protective suit, one part, for protection against solid, liquid and gaseous chemicals. Besides an extremely high resistance to chemicals, another remarkable feature of **TeamMaster pro** is its ruggedness against mechanical influences. Due to the new material HIMEX Dräger has set new standards in combining mechanical and chemical characteristics:

- High resistance to flarebacks
- Exceptional resistance to chemicals, also at low temperatures and in handling cold media
- Easy change of gloves and safety boots. The chemical tightness is maintained
- Breathing apparatus and helmet are worn under the suit
- Practical inside pocket for a walkie talkie, etc.
- Exchangeable backpack padding
- The newly designed, very strong Seallex seam is also extremely gastight
- The zipper with an inside metal chain and a Viton-coating on the outside is highly gastight
- Large panorama visor for optimum sight.

The suit is in conformity with the specifications of VFDB, rule 0801, and consists of:

- TeamMaster pro basic suit, size XL for body size 180 up to 200 cm
- Safety boots size 46, DIN 4843-10
- Viton gloves, size 11
- PVC over-gloves
- Cotton gloves
- Backpack padding

Colour: Blue

Weight: 8 kg

.....58728

Chemical protective suit "Reflector", VFDB 0801, appendix A

A protective suit for limited use only. It is the first suit where a **comprehensive resistance to chemicals** is combined with a **reflecting, antistatic flareback protection** of up to **1093°C/8 sec.** The suit is gastight, with gastight zipper (Viton) with double zipper cover, velcro fastener and footlets with spray-arresting cuffs. All seams are resistant to chemicals on both sides as well as gastight through heat sealing. The suit is made of a heavy-duty high-tech material. Tested according to ASTM F 1001 test series on penetration of chemicals and according to NFPA 1991 on flame impact (burning test) and according to heat insulation standards (TPP) on skin protection. Due to a special zipper design, the extra wide back as well as the quick-disconnect belt it is easy to put on and take off, even with compressed-air breathing apparatus. Good mobility and sufficient flexibility. The large visor made of FEP-teflon/PVC provides excellent view. The inside gloves are made of butyl. The PBI-Kevlar® over-gloves are easy to exchange due to a quick-change system.

Colour: Silver

Sizes: M, L, XL, XXL

(Size XXL 10% surcharge)

Protective shoes, size 49, complying with VFDB rule, appendix A, are included.

Weight: 6 kg

.....9572



9572

Chemical protective suit "Responder", VFDB 0801, appendix A

Gastight, with gastight zipper (Viton) with double zipper cover, velcro fastener and footlets with spray-arresting cuffs. All seams are resistant to chemicals on both sides as well as gastight through heat sealing. Due to Kappler's patented chemical protective material **Responder** this suit provides comprehensive protection. Tested according to ASTM F 1001 series on more than 200 chemicals and gases. The special zipper design, the extra wide back as well as the quick-disconnect belt make the suit easy to put on and take off even with compressed air breathing apparatus. Good mobility and sufficient flexibility also in low temperatures (tested up to -40°C). The large visor made of FEP-teflon/PVC provides excellent view. The inside gloves are made of butyl. The PVC over-gloves are easy to exchange due to a quick-change system.

Sizes: M, L, XL, XXL

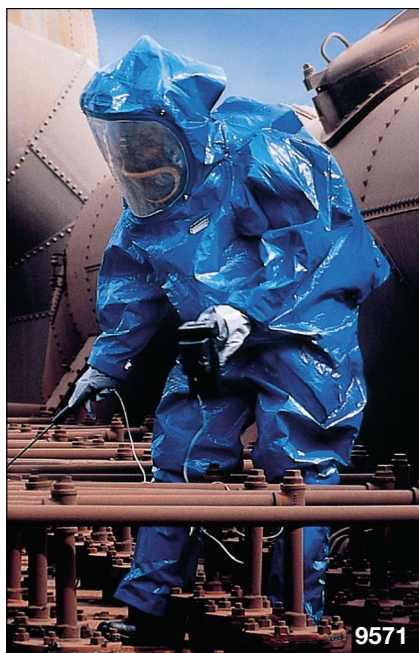
(Size XXL 10% surcharge)

Protective shoes, size 49, complying with VFDB rule, appendix A, are included.

Weight: 3.4 kg

(Illustration on page 3)

.....9571



9571



63926

DRÄGER chemical protective suit 710 PVC

This suit is ideal for work with acids and alkalis of low concentrations.

Due to the long gastight front zipper the suit is quickly put on and taken off.

Colour: White

Size: XL for body sizes
of 180-200 cm

Weight: 6 kg

.....63926

Transport bag*

Made of tearproof, coated nylon fabric,
for chemical protective suits
TeamMaster pro and 710 PVC

.....63929

59159



DRÄGER Porta Control

Test box for testing of chemical protective suits. The valves as well as the complete suit can be checked for tightness. In the Dräger Porta Control all adapters for testing a Dräger suit worn over a compressed air breathing apparatus are found.

Dim. (LxWxH): 420x330x110 mm

Weight: 3.8 kg

.....59159



9566

Light chemical protective suit

Made of Kappler-CPF-2 (131 g/m²).

Colour: Grey. Overall with hood.

Hood with elastics around the face, sleeves and legs. Nylon zipper down to the crotch with overlapping trimming and double velcro strip for perfect tightness.

Sizes: M, L, XL, XXL

(Size XXL 10% surcharge)

.....9566

Light chemical protective suit*

DIN 32762, style A, "ISOTEMP-Acid-Stop", one piece 4007, material PVC. With large hood with velcro fastener, sleeve cuffs with elastics, front zipper with trimming and velcro fastener, wide trouser legs with velcro strap for tight fitting. All seams are sealed (liquid-proof).

Size: XL

Weight: 1.8 kg

.....57276

Kleenguard-Overall*

Kimberly-Clark. Made of specially treated material, for protection against splashes and spray of organic and water-soluble chemicals. For use with less toxic chemicals. Spacious cut in T-design for maximum mobility.

Tested according to EN 368, antistatic test according to prEN 1149.

Design: Overall without shoulder seams, blue, without hood, with two pockets, elastic waistband, nylon zipper with overlapping trimming.

Sizes: M, L, XL, XXL

(Size XXL 10% surcharge)

.....9565

Jump suit, navy blue*

Made of 93% cotton and 7% polyamide. The jacket with zipper can be worn as a roll-neck. Trousers with a zipper pocket, leg bottoms with cuff.

Sizes: S, M, L, XL, XXL

.....9482

Woollen socks*

Three pairs, assorted, 2 pairs grey,
1 pair blue, long type

.....9499

Gym shoes*

Made of cloth, with profile sole.

Sizes: 36-46

.....9472



DECONTAMINATION STAINLESS STEEL FITTINGS



"SE-Shower"

(Quickly erected decontamination shower) **without compressed air cylinder**. This shower is mainly used for mobile decontamination of chemical protective suits. The shower cabin made of PVC coated polyamide fabric is fixed with cords to an inflated hose frame, so that it can be removed, if required. The shower frame is inflated by means of a compressed air cylinder or bellows. In the shower cabin there are three shower nozzles; water supply by means of a hose line. Ready for use within less than 20 seconds, one operator only.

Erection area: 3x3 m

Packing dim. (LxWxH):

900x550x400 mm

Dim. erected (LxWxH):

1930x1340x2450 mm

Weight: 28 kg (without compressed air cylinder)

.....56338

Decontamination apparatus

for safe and quick treatment of the skin in contact with phenols, cresols and xylenols. Pressure tank 30 bar with 10 l of polyethyleneglycol 300 and ethanol, ratio 2 : 1.

Chemical resistant high pressure hose with nozzle and shut-off valve. Outside propellant cylinder CO₂.

Dim. (HxWxD): 585x305x215 mm

Weight: 17.6 kg

.....88155

Stationary decontamination and drying units, please see chapter 6 "Equipment for fire stations".



OCULAV - combined eye rinsing and squirting bottle

for immediate and highly effective rinsing of the eyes. Provided with air valve and two exchangeable caps, i.e. the boat-shaped cap for rinsing the eyes in case of slight causticizations and the tubular yellow cap for squirting out the eyes as well as for removal of impurities after heavy injuries.

Contents: 820 ml

.....63882

Eye rinsing solution

Packed in sterile bags.

Contents: 250 ml

.....63881

Water can 20 l

Marked, with valve and hose. When put in a suitable place immediately ready for rinsing of eyes and face

.....63880

Chemical resistant armatures

Acid proof hoses, pumps, fittings, tanks etc. are provided with hose connections of dimensions acc. to DIN 11854 (also called acid couplings). Inlet with cone-type connection SD, DIN 11851, with mobile but captive nut F, DIN 11854. Outlet with threaded connection SC, DIN 11851. Basically stainless steel, material no. 1.4571, DIN 17440, is used for armatures. For castings material no. 1.4408, DIN 17445, is preferred. Deviations due to technical reasons are stated.

If possible, the parts are professionally welded into one unit and the welding seams are pickled.

The threaded connections are sealed against leakages by means of an oil and acid proof liquid plastic material. Coupling sealings are made of FKM (Viton, black) according to ASTM-D 1418-76 and thread sealings are made of PTFE (teflon, white). They are suitable for suction as well as for delivery.



The chemical resistant armatures listed below are in conformity with equipment plan, DIN 14555-12-13-14. Other armatures and coupling systems are offered on request.

Pair of couplings, stainless steel, DN 50

for chemical resistant hoses, with 2 grounding screws, sealings of Viton, consisting of threaded connection and cone-type connection with nut.

Weight: 1.5 kg

.....41070

Pair of couplings, stainless steel, DN 50*

for fitting to chemical resistant hoses by means of screwed clamp connections, consisting of cone-type connection with nut and threaded connection.

Weight: 1.5 kg

.....41073

Clamp connections*

for couplings of stainless steel DN 50, art.no. 41073

.....41075

STAINLESS STEEL ARMATURES SEALINGS



Three-way valve DN 50

Stainless steel. Passage with cone-type connection with nut and threaded connection, branch with threaded connection and with blank cap and chain.

Weight: 4.8 kg

.....44030

Ball valve DN 50

Stainless steel. With cone-type connection with nut and threaded connection.

Weight: 2.5 kg

.....44042



Elbow 90° DN 50

Stainless steel. With cone-type connection with nut and threaded connection.

Length: 350 mm

Weight: 0.6 kg

.....44044

Drain pipe DN 50

Stainless steel. Bend 45°, with cone-type connection with nut. Accessory to ball valve.

Length: 300 mm

Weight: 0.6 kg

.....44043

Elbow 45° DN 50*

Stainless steel. With cone-type connection with nut and threaded connection.

Length: 350 mm

Weight: 0.6 kg

.....44052

Suction pipe DN 32

Stainless steel. For removing of residual liquids, with hand protection, with threaded connection at the top end and with a bend of 45° and foot valve with ball of NBR (perbunan) at the lower end, ground sieve with a hole of 4 mm Ø.

Length: 1000 mm

Weight: 5 kg

.....44045

Suction strainer DN 50

Stainless steel. Inlet opening at least 65 mm Ø, valve ball of NBR (perbunan), with threaded connection.

Weight: 2.5 kg

.....42308

Safety drain pipe DN 50

Stainless steel. With hand protection. Elbow of 90° at the top end with cone-type connection with nut, divider sieve DN 65 with screw-off bearing plate at the bottom end. For laminar draining of inflammable liquids.

Length: 1000 mm

Weight: 5 kg

.....44046

Adapter Storz C 52

Cone-type connection with nut

Stainless steel, DN 50.

Weight: 1.5 kg

.....42022

Adapter Storz C 52

Threaded connection

Stainless steel, DN 50.

Weight: 1.2 kg

.....42023

Connection piece DN 50

Stainless steel. Both sides with cone-type connection with nut.

Weight: 1 kg

.....44034

Connection piece DN 50

Stainless steel. Both sides with threaded connection.

Weight: 0.9 kg

.....44035

Set of spare FKM sealings*

Consisting of 10 sealings for acid couplings DN 50, 6 size C Storz suction sealings. Packed in a bag.

Weight: 0.2 kg

.....44024

Adapter

One side with 2" female thread with PTFE sealing, the other side with threaded connection DN 50 with FKM sealing.

Weight: 0.6 kg

.....44013

Adapter

One side with 2" female thread with PTFE sealing, the other side with cone-type connection DN 50 with nut.

Weight: 0.9 kg

.....44014

Set of flanged adapters for industries*

Stainless steel. One adapter each with flange DN 40, 50, 80 and 100, DIN 2527 ND 6, with packing grooves on one side. The other side with threaded connection DN 50 with FKM sealing.

Weight: 10.6 kg

.....44007

Set of flange sealings ND 6*

Soft PVC, 3 mm strong, consisting of 8 sealings each of size DN 40, 50, 80 and 100, DIN 2690 ND 6, for adapters, art.no. 44007.

Weight: 2 kg

.....44012

* = not illustrated



STAINLESS STEEL ARMATURES

COUPLING WRENCHES

SEALINGS



Set of tank truck flanges

Stainless steel, 1.4571. One piece each with flange DN 80 and DN 100, DIN 28461 ND 10, with sealing grooves. The other side with threaded connection DN 50 with FKM sealing.

Weight: 5 kg

.....44019

Set of tank truck flanges ND 10*

Soft PVC, 3 mm strong, consisting of 8 sealings each of size DN 80 and DN 100, DIN 28463 DN 10, for tank truck adapters, art.no. 44019.

Weight: 2.5 kg

.....44018

Set of hexagon head cap screws*

(20 pcs.). Stainless steel, M 16x60, DIN 933, nuts DIN 934 and washers DIN 125, for flange connections DN 16, 32 and 100.

Weight: 3.5 kg

.....44015

Set of hexagon head cap screws*

(20 pcs.). Stainless steel, M 12x50, DIN 933, nuts DIN 934 and washers DIN 125, for flange connections DN 16, 20, 25 and tank truck flanges DN 100 - 125.

Weight: 2.6 kg

.....44016

Set of hexagon head cap screws*

(20 pcs.). Stainless steel, M 10x60, DIN 933, nuts DIN 934 and washers DIN 125, for tank truck flanges DN 50 and 80.

Weight: 2.1 kg

.....44017



Universal barrel wrench

Non-sparking, made of special bronze alloy, for 22 different barrel plugs.

Length: 400 mm

Weight: 2.5 kg

.....63919

Hook wrench DIN 1810

Stainless steel, for acid couplings.

Weight: 0.5 kg

.....63903

Coupling wrench B/C

Made of a non-sparking alloy, for Storz couplings.

Weight: 0.45 kg

.....44915

Universal sealing and draining coupling "Öko-Protector"

Couplings as well as burst pipes can be sealed or provided with emergency drain couplings by means of the "Öko-Protector". With the standard kit pipes with a diameter from 40 mm up to 100 mm and flanges DN 40 up to DN 100, with dimensions acc. to DIN 2527 and 2846, can be sealed. The standard kit includes: 2 flanges with DN 50 drain connection, a self-arresting supporting ring, a universal clamping device.

Dim. (LxWxH): 520x420x200 mm

Weight: 10 kg

.....44057

Unika tank wagon drain coupling*

Elbow and threaded connection DN 50 of stainless steel, clamping device of light metal casting, sealing of FKM (Viton).

Weight: 8.5 kg

.....44047



Unika tank wagon drain coupling

Completely of stainless steel, with threaded connection DN 50.

Weight: 8.5 kg

.....44048

Tank wagon adapter KWZ 5 1/2"

Stainless steel (for draining off from rail tank wagons), one side with thread, the other side with threaded connection DN 50.

Weight: 2 kg

.....44040



Tank truck adapter VK 80

Stainless steel, DIN 28450, one side curved piece with teflon thread seal, the other side with threaded connection DN 50.

Weight: 1.7 kg

.....44036

Tank truck adapter MK 80

Stainless steel, thread DN 50, DIN 28450, one side with sealing ring piece with clamping ring and lever, the other side with threaded connection DN 50.

Weight: 2.4 kg

.....44037

Some articles may not be available in specific countries. Details on request.

* = not illustrated

Tank truck adapter VK 50*

Stainless steel, DIN 28450, one side with curved piece, the other side with threaded connection DN 50.

Weight: 1.3 kg

.....44038

Tank truck adapter MK 50*

Stainless steel, DIN 28450, one side with sealing ring piece with clamping ring and lever, the other side with threaded connection DN 50.

Weight: 2 kg

.....44039

Set of sealings*

for tank truck adapters consisting of:
1 sealing GSD of FKM (Viton) for MK 50 and MK 80,
each 1 thread sealing of PTFE (teflon) for MK 50 and MK 80,
1 sealing of FKM (Viton) for Unika and
1 sealing of FKM (Viton) for KWZ

.....44055

Chemical resistant hoses

All hoses are electrically conductive and with the exception of the delivery hose of size C 52 they are suitable for suction as well as for delivery. The connection pieces of the couplings are sealed by means of a sleeve and are provided with grounding lugs with screws M 8 and captive wing nuts.

Corrugated hose DN 50*

Stainless steel V4A, with acid couplings DN 50, parallel corrugation with wire braiding. Working pressure 10 bar, bending radius 220 mm. One end with threaded coupling, the other end with cone-type connection with nut.

DN 32, 5 m long, 5 kg 44032

DN 50, 5 m long, 9.5 kg 44033

Spiral suction and delivery hose*

PVC, with stainless steel acid couplings DN 50, high resistance to oils and acids, with plastic spiral, electrically conductive through copper strand. Working pressure up to 7 bar, temperature resistance from -15°C up to +60°C. One end with threaded connection, the other end with cone-type connection with nut.

DN 32, 5 m long, 3 kg 44028

DN 32, 10 m long, 4 kg 44029

Non-deformable suction and delivery hose DN 50*

High resistance to acids and mineral oils, with acid coupling DN 50. Due to the small bending radius of 80 mm this hose is especially suitable for use with Hydrovac units. The hose core is made of chloroprene rubber (neoprene) and the outer layer of nitrile rubber. With copper strand and pressure carrying fabric as well as stabilizing PVC spiral. Working pressure up to 3 bar, bursting pressure 20 bar. Both ends with screwed-on clamp. One end with threaded connection, the other end with cone-type connection with nut.

15 m long 31300

Suction and delivery hose

Resistant to acids and mineral oils, 6 mm strong, complete with acid couplings DN 50. **Marking blue-white-blue.** Inside layer of ultrahigh molecular polyethylene U-PE, a pressure carrier of textile braid with tinned copper fibres and a galvanized wire spiral. Outside layer of EPDM, electrically conductive. Working pressure 16 bar. One end with threaded connection, the other end with cone-type connection with nut.

DN 50, 5 m long 31320

DN 32, 5 m long* 31296

DN 32, 10 m long* 31298



Suction and delivery hose*

As art.nos. 31320, 31296 and 31298 above, but one end with threaded connection DN 50, the other end notched without coupling.

DN 32, 2.1 m long 31321

Suction and delivery hose

With even **better spectrum of application** due to new inside layer.

Resistant to acids and mineral oils, 6 mm strong, complete with acid couplings DN 50. **Marking blue-white-red.**

Inside layer of fluoropolymer, pressure carrier of textile braid with tinned copper fibres and a galvanized wire spiral. Outside layer of chloroprene (CR), electrically conductive.

Working pressure 16 bar. One end with threaded connection, the other end with cone-type connection with nut.

DN 50, 5 m long 31325

DN 32, 5 m long* 31326

DN 32, 10 m long* 31327

Suction and delivery hose*

As art.nos. 31325, 31326 and 31327 above, but one end with threaded connection DN 50, the other end notched without coupling.

DN 32, 2.1 m long 31328



According to DIN 14555-12, 13, 14, the couplings of the chemical resistant hoses alternatively can be fastened with screw clamps, which means that the couplings can be fixed without assembly presses. The clamps are provided with a safety band that surrounds the coupling safety collar. This kind of fixture ensures a simple and quick fastening of the couplings.

Important!

The fixing of the couplings must be done in compliance with DIN 2817-1 and 2, as well as para 7.5 of DIN 14555-12.



HOSES

HAZ-MAT PUMPS AND ACCESSORIES

Spiral suction and delivery hose DN 32*

As art.no. 44028, but with
clamp fitting.....**31309**

As art.no. 44029, but with
clamp fitting.....**31311**

As art.no. 31320, but with
clamp fitting.....**31329**

As art.no. 31296, but with
clamp fitting.....**31313**

As art.no 31298, but with
clamp fitting.....**31315**

As art.no. 31321, but with
clamp fitting.....**31330**

As art.no. 31325, but with
clamp fitting.....**31331**

As art.no. 31326, but with
clamp fitting.....**31332**

As art.no. 31327, but with
clamp fitting.....**31333**

As art.no. 31328, but with
clamp fitting.....**31334**

Hoses of other material, construc- tion, coupling as well as diameter and length on request.

Delivery hose size C 52-15

Electrically conductive due to copper
strands with captive earthings on the
couplings, resistant to mineral oils.
Warp and filling yarn are double
twisted. Hot vulcanized perbunan
inside lining, abrasion proof outer
coating.

Length: 15 m

Weight: 8.5 kg

DN 50 acid coupling*

Stainless steel, with Viton sealing
.....**63963**

Storz C 52

Stainless steel, with Viton sealing
.....**31104**

31104



Set of worm drive hose clips*

DIN 3017, stainless steel.

5 pcs. clamping range 25 - 40 mm

5 pcs. clamping range 30 - 50 mm

5 pcs. clamping range 50 - 70 mm.

Width 9 mm. Packed in a bag.

Weight: 0.5 kg

.....**63865**

Set of pipe clamps*

Stainless steel, with clamping screw,

2-part, 25 mm wide, consisting of 2

pcs. each for size NW 15, 20, 25, 32,

40, 50, 65, 80, 100, 150, 250 mm.

Packed in a box

.....**63811**

65051



ELRO haz-mat pump GUP 3-1.5

DIN 14427 PVR 360/2/93. Self-priming
hose pump with hypalon delivery hose,
electrically conductive, complete with
threaded connection DN 50 on the
delivery outlet elbow and cone-type
connection with nut DN 50 on the
suction inlet elbow of stainless steel.
With FKM (Viton) sealings.

The pump is immediately ready for
use, with quick and automatic aspira-
tion. Trouble-free delivery of semiliquid
or foamy media with solid particles.

Some articles may not be available in
specific countries. Details on request.

Due to the excellent pumping capacity
even residuals and thin liquid films
are absorbed, even if the delivery is
interrupted frequently by air aspiration.
The hazardous material is not in
contact with the actual pump. The
pulsating pump operation is compen-
sated by the stainless steel pulsator.
With ex-proof three-phase motor
400 V, 2.75 kW, EEx e II T3,
motor protection switch EEx de II CT6,
connecting cable 1.5 m H 0 7 RN-F 5
G 2.5 with 5-pole plug EEx de II CT6,
400 V, 16 A, with light plug socket
EEx de CT6, 230 V.

Size of carrying frame complying with
DIN 14424.

With 4 foldable handles as well as
motor cover of stainless steel.

Performance: 300 l/min

Nominal delivery pressure: 2 bar

Priming time at 7.5 m suction height:
5 sec.

Dim. (LxWxH): 620x390x520 mm

Weight: 98 kg

.....**65051**

Hypalon hose*

with stainless steel coupling connec-
tion for ELRO pump

.....**63838**

65057
65058

65056



ELRO transport drum

Stainless steel 1.4435, with screw-on
lid, capacity 190 l, vacuumproof.

Flange opening NW 250.

Transport approval UN-1A1.

Weight: 48 kg

.....**65056**

* = not illustrated

ELRO fill device

for transport drum, art.no. 65056.
Fits into the drum flange opening NW 250. With 2" male thread inlet with pipe to drum bottom, 2" male thread suction outlet with suction strainer and 1" male thread suction outlet with blank plug and float. To be used in vacuum operation with ELRO pump. Made of stainless steel. When using this fill device the ELRO fitting, art.no. 65058 is required.
Weight: 8.4 kg

.....65057

ELRO fitting for fill device

Consisting of: 1 adapter 2" female thread on DN 50 cone-type connection with nut and 1 adapter 2" female thread on DN 50 threaded connection, both with blank cap.
Weight: 2.4 kg

.....65058



ELRO special suction pipe with ball valve

Stainless steel, for large quantities, with threaded connection DN 50.
Length: 920 mm
Weight: 7.1 kg

.....65061

ELRO vacuum cleaner

for complete removal of liquid films on even surfaces (ground, roads).
Suction surface 500x100 mm. With exchangeable CSM (hypalon) filter plate, with threaded connection DN 50, stainless steel.
Length: 1400 mm (with pipe)
Weight: 1.1 kg

.....65053

ELRO special suction pipe

for removal of small quantities from gaps, hollow spaces and containers. One end tapered, the other end with threaded connection DN 50, stainless steel.

Dim. (LxØ): 1010 mm x 3/4"

Weight: 2.6 kg

.....65054

ELRO low level suction attachment

Stainless steel. For use with low liquid levels. Housing with perforated base plate, bore of 10 mm Ø. With threaded connection DN 50.

Dim. (HxØ): 60x250 mm

Weight: 2.6 kg

.....65052



ELRO flexible hose

An easy-to-handle PVC hose with plastic reinforcement. One end with threaded connection, the other end with cone-type connection with nut DN 50 of stainless steel. Not suitable for combustible liquids.

5 m long*, 5.4 kg.....65047

10 m long, 8.4 kg.....65048

ELRO vacuum hose 1"*

One end with threaded connection, the other end with hose sleeve with 1" union nut.

Length: 10 m

Weight: 8.3 kg

.....65049

ELRO lubricant*

Silicone oil (1 l) for ELRO haz-mat pump

.....65069

Haz-mat pump GUP 3-1.5 DIN 14427, MAST

DIN 14427 PVR 354/4/92.

Single-stage self-priming centrifugal pump, safe to run dry. Designed for

delivery of aggressive liquids, mineral oil products and combustible liquids of explosion class II A and II B. Pipe frame and all parts in contact with liquids are made of stainless steel. Complete with threaded connection DN 50 at the delivery outlet and cone-type connection with nut DN 50 at the suction inlet. FKM (Viton) sealings. Frame with foldable handles and hand protection. Including pressure-proof vacuum gauge with vibration absorption. With manually operated piston pump priming unit. With motor-protection switch, 5-pole/16 A plug and 3-pole/16 A ex-protected light plug socket, EEx e II T3. Three-phase motor 400 V/50 Hz, EEx E II T3, power input 3.0 kW, power output 2.5 kW, grain passage 10 mm. Self-priming up to 8.4 m.

Delivery:

620 l/min at 0.5 bar,

550 l/min at 1 bar,

340 l/min at 1.5 bar and

0 l/min at 2 bar.

Dim. (LxWxH): 620x390x460 mm

Weight: 82 kg

.....65073



Lever operated diaphragm pump

Stainless steel, with acid couplings DN 50. Delivery 3.5 l per stroke (150 l/min), delivery height max. 6 m, suction height max. 5 m, grain passage at least 10 mm Ø. The flow direction is clearly marked. Rugged carrying frame with splash guard over the elastomere diaphragm. Pump lever 1.2 m with hand guard and stainless steel acid couplings. Suction side with cone-type connection and nut, delivery side with threaded connection.

Weight: 11.5 kg

(illustrated on page 10)

.....65084

* = not illustrated



HAZ-MAT PUMPS AND ACCESSORIES



65084

Motor-protection switch, ex-proof EEx de II CT6*

for submersible pump, with 10 m of connecting cable H 0 7 RN-F 5 G 2,5 on feed and discharge side. On one side with 5-pole plug EEx de II CT6 and on the other side with 4-pole coupling EEx de II CT6 for connection to the submersible pump.

Weight: 15 kg

65680

Please note: Art.no. 65680 is absolutely necessary for the connecting to a 5-pole 400 V mains/generator.

Motor power is transmitted via an elastic coupling.

Weight: 6.2 kg

65070

Pump gear

Stainless steel 1.4571, ETFE worm conveyer, packingless.

Outside diameter 41 mm, immersion depth 1200 mm,

max. performance 243 l/min, temperature of pumping medium max. 100°C.

With threaded connection DN 50.

Dim. (LxW): 1560x320 mm

Weight: 3 kg

65080

Foot sieve

Stainless steel, Ø 41 mm

63862

Pump gear

Polypropylene, safe to run dry for a short time, worm conveyer of teflon ETFE.

Outside diameter 40 mm, immersion depth 1200 mm,

max. performance 170 l/min, temperature of pumping medium max. 50°C.

With threaded connection DN 50.

With warning plate: "Not approved for transferring combustible liquids".

Dim. (LxW): 1560x320 mm

Weight: 1.5 kg

65081

Foot sieve*

Polypropylene, Ø 41 mm

63969

Earthing cable*

On both ends with cable shoe M 8, Ø 8 mm. Length: 2.5 m

Attention! Ex-proof only when used with pump gear of stainless steel

82122

Pump gear of Hastelloy C*

Material no. 2.4819, slide ring sealing of ceramics and PTFE, worm conveyer of ETFE.

Outside diameter 38 mm, immersion depth 1200 mm,

max. performance 130 l/min, at 0.2 bar 110 l/min,

temperature of pumping medium max. 120°C.

With threaded connection DN 50.

Dim. (LxW): 1560x320 mm

Weight: 10 kg

63991

Set of spare parts for lever operated diaphragm pump DN 50*

Consisting of each two spare diaphragms, valve clap brackets and Viton sealings DN 50

65074

Spare diaphragm*

for lever operated diaphragm pump

65121

Carrying wire

Stainless steel, for acid submersible pump, Ø 6 mm, with two load ropes of 0.6 m, with stainless steel carabines and three loops over the load ropes at a distance of 1.5 m and a loop at the end of the wire.

Length: 15 m

Weight: 2 kg

63976

Drum and tank pump

Consisting of motor and pump gears suitable for the relevant application.



65679

63976

Submersible pump, explosion-proof

Stainless steel 1.4008, EEx de II BT4. Motor 400 V/1000 W. Delivery approx. 340 l/min at 0.4 bar, sieve for grain size of up to 8 mm Ø. 8 m connection cable with ex-proof 4-pole plug EEx de II CT6 400 V for connection of the ex-proof motor-protection switch. With 5 m cable protecting hose of PTFE (teflon) as well as stainless steel corrugated hose for additional safety. Protection against kinking at the pump inlet. With warning plate:

"Not approved for transferring combustible liquids from containers and drains/sewers".

With threaded connection DN 50.

Weight: 45 kg

65679



65070

65080

65081

63862

Universal motor ME II 5

Ex-proof EEx de II CT6. Power input 540 W, 230 V, 50 Hz, double insulated complying with protection class II and protective conductor connection. With no-volt release, 2-pole on/off switch, double-pole thermic overcurrent release. Spray-water protection IP 54. With 10 m of connecting cable and ex-proof plug EEx de II CT6, 16 A. Housing made of special plastics resistant to impact, acids and solvents. The pump gears are connected to the motor by means of the hand wheel.

Some articles may not be available in specific countries. Details on request.

* = not illustrated

HAZ-MAT PUMPS

HYDROVAC

HAZ-MAT VACUUM COLLECTING SYSTEMS



Haz-mat diaphragm pump

Compressed air operated. Made of electrically conductive PTFE (teflon) and electrically conductive PP (polypropylene) with special couplings 1/2" and stainless steel carrying frame with grounding connection. Drive via compressed air cylinders, vehicle brake connections, compressed air ductwork systems or compressors. Performance: 10 - 20 l/min
Delivery height: max. 6 m
Suction height, dry: 0.5 m
Suction height, filled: 8 m
Drive pressure: 2 - 6 bar
Air consumption: 50 - 200 l/min
Accessories:
2 stainless steel corrugated hoses 1/2" at 2 m
2 plastic hoses 1/2" at 2 m, resistant to mineral oils.
Dim. (LxWxH): 150x200x250 mm
Weight: 5 kg

.....65075

HYDROVAC haz-mat vacuum collecting systems

"HYDROVAC" haz-mat vacuum collecting system type HY C/L 2000*

with integrated oil separator, mounted on a tandem-axle trailer. For universal use in haz-mat accidents for absorbing and transferring as well as separating oil/water mixtures, consisting of:

- 1 stainless steel vacuum generator
- 1 stainless steel primary separation chamber of 500 l
- 2 stainless steel secondary separation chambers at 250 l
- 1 vacuum-proof automatic drain device, art.no. 34083
- 1 iron-hooped steel drum, 200 l, with lid, art.no. 65039

- 1 stainless steel cyclone cover, art.no. 34082
- 2 special suction hoses at 15 m, electrically conductive
- 1 hand pipe ND 50, 1 m long
- 1 ground suction nozzle, 500 mm wide, made of Al Mg 30 (on request stainless steel)
- 1 tandem-axle trailer.

Please note: Coupling system must be stated!

Technical data:

Performance 20 mbar (98%) and an air capacity of 200 m³/h. The liquid suction capacity is approx. 350 l/min when using a hose length of 10 m and 220 l/min at a hose length of 100 m. Use of longer hoses is possible. The absorption capacity is 1000 l, limited transport capacity 750 l.

Approved as working machine by TÜV Hessen.

Dim. (LxWxH): 3.6x1.9x1.65 m

Total trailer weight: 2000 kg

.....34135



Electric circulating pump

Ex-proof, 400 V/12 kW, on frame, for multi-purpose vacuum cleaning unit C/L 2000. On request a high pressure cleaner for removing of oil marks can be added to the system. The water required for this cleaning can be taken from the HYDROVAC unit. An additional container is required for the cleaning agent. With this cleaner the oil marks can be sprayed and the dissolved oil can immediately be absorbed

.....34136

Automatic draining unit

Only for use with art.no. 34082 (cyclone cover) and a vacuum pump (e.g. HYDROVAC unit or ELRO hose pump).

With the automatic drainer open containers and tank wagons can be filled in vacuum operation. Furthermore, waste water can be let in the sewage system in vacuum operation

.....34083

Cyclone cover

for filling of vacuum-proof collecting containers in vacuum operation (e.g. drum with crimped lid made of 1.4301, 1.4571 or galvanized sheet steel), or for filling from open collecting containers and tank wagons in connection with automatic draining unit, art.no. 34083. The cyclone cover is used in connection with a vacuum pump (HYDROVAC unit or ELRO-hose pump). When the filling level 0.9 is reached a valve automatically stops the filling. Suction connection with cone-type connections DN 50 with nut, vacuum connection with threaded connection DN 50

.....34082



"HYDROVAC" haz-mat vacuum clean-up system HY-1000 / C

Comprising a vacuum generator, one suction hose reel with 2 non-deformable suction hoses, Ø 50 mm, at 15 m and a cyclone cover on a 200 l standard drum, all stored on a transport frame. The function of the unit is the same as that of HY C/L 200 but no automatic draining unit is provided. The hazardous material is transferred via the cyclone cover into the vacuum-proof standard drums (e.g. art.no. 65039 or 63997).

Performance: approx. 350 l/min with 10 m of suction hose and approx. 220 l/min with 100 m of suction hose. Weight: 180 kg on transport frame

.....34133

* = not illustrated



EQUIPMENT FOR COLLECTING, TRANSPORTING AND STORING OF HAZARDOUS MATERIAL

Drum 200 l with crimped lid

Stainless steel, 1.5 mm, removable lid with clamping ring and lever fastener, sponge rubber sealing.
 Approv.no. UN/1A2/Y1.5/200-D/BMA/9160/BFD/E 46.
 Dim. (outside ØxH): 621x890mm
 Weight: 39.5 kg
 (illustrated on page 11)

.....65039



Drum 200 l

Stainless steel V4A (1.4571), 1.5 mm strong. Welded hoop-reinforced bottom, shell with two galvanized T-hoops. With removable lid, sponge rubber sealing, clamping ring and lever fastener.

Dim. (ØxH): 620x887 mm
 Weight: 41 kg

.....63997

Drum insert made of lupolene*

for 200 l drums with clamping lid. The ideal tool for steel and stainless steel drums for increasing the storage capacity of aggressive media. An economical and practical solution.

Dim. (ØxH): 600x1350 mm

.....65030

Transport container for hazardous liquids

Especially designed for transport of acids and alkalis. Type tests and transport licence for hazardous materials class 8 "corroding agents" have been obtained. Tank made of crosslinked polyethylene, with fill opening of 150 mm diameter, with screw lid, with Viton sealing. Draining by means of a ball valve DN 32 PP/V with 1 1/4" male thread, with threaded stainless steel connection DN 50 with Viton sealing. Pressure compensation by means of leak-proof permanent venting valve.

Approv.no. and date of manufacture are engraved on the container.
 Box pallet blue, with jack rings.

Transport container 580 l*

Approv.no. D/BAM/97.582.
 Pallet base dim. 800x1200 mm.
 Overall dim. (LxWxH):
 837x1240x970 mm
 Weight: 113 kg

.....63992



Transport container 880 l

Pallet base dim. 1000x1200 mm.
 Overall dim. (LxWxH):
 1037x1242x1255 mm
 Weight: 155 kg

.....63993

Salvage drum "Standard"

Complete with screw lid. For metal drums with a capacity of up to 250 l. Material: 100% recycling polyethylene material, resistant to acids, alkalis and oils. Standard colour yellow.

Possible applications:

- For depositing metal drums
- Salvage of agents endangering the groundwater after average
- Safe storage of salvaged materials from abandoned factories or garbage dumping grounds
- Intermediate storage in waste treatment plants
- Repacking in chemical works

Dimensions:

Outside Ø: 1010 mm
 Height incl. lid: 1235 mm
 Inside height: 1035 mm
 Inside Ø top: 847 mm
 Inside Ø bottom: 735 mm
 Volume: 500 l
 Weight: 34 kg

.....65040

Some articles may not be available in specific countries. Details on request.

65040



Salvage drum*

As art.no.65040, but with vent plug 2" in the centre of the lid

.....65041

Drum adsorbing cartridge*

for art.no. 65041. Made of plastics, with one outside and one inside cylinder, incl. shakeproof, highly effective activated rod-shaped charcoal filter, for injurious gas separation. Connection 2" male thread.

Dim. (ØxL): 119x290 mm

.....65034

Spare filling activated charcoal*

.....65035

Rain hood for drum adsorbing cartridge*

.....65036

65042



Drum grabbing device as depositing aid

Metal, carrying load 450 kg.
 Weight: 9 kg

.....65042

* = not illustrated

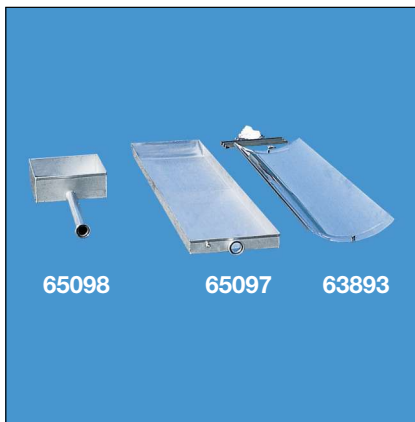
EQUIPMENT FOR COLLECTING, TRANSPORTING AND STORING OF HAZARDOUS MATERIAL



Salvage drum with lid

Stainless steel V4A (1.4571), volume approx. 400 l, 1.5 mm strong. Welded hoop-reinforced bottom, shell with 2 x 3 reinforcement grooves. With removable lid with sponge rubber sealing, galvanized clamping ring and lever fastener.
Dim. (ØxH): 710x1135 mm
Weight: 44 kg

.....65038



Collecting container

Stainless steel, with outlet pipe of 600 mm, with threaded connection DN 50 and grounding connection with captive wing nut.
Dim. (LxWxH): 400x400x150 mm
Weight: 8 kg

.....65098

Collecting gutter for acids

Stainless steel. With threaded stainless steel connection DN 50, height of reinforced edge approx. 80 mm.
Dim. (LxW): 2000x450 mm
Weight: 12.5 kg

.....65097

Collecting gutter for acids, 4 parts

Stainless steel, 0.5 mm strong. The parts, length 1800 mm/width 480 mm, can be connected. With bores for bracing with 4 cords and carabines, 3 screws with wing nuts and 3 form holders.

Weight: 25 kg

.....63893



Bucket

Stainless steel, 15 l, with double bottom, heavy type, one side flattened.
Weight: 3.8 kg

.....63877

Trough

Stainless steel, conical, with two hinged carrying handles 75x105 mm, for transporting of hazardous material as well as for heaping up sand, garden peat, sawdust, oil binder etc.
Dim. (LxWxH): 610x410x180 mm
Weight: 8 kg

.....83423

Funnel

Stainless steel 18/8, Ø 250 mm.
Weight: 0.5 kg

.....84166



Collecting funnel

Made of chemical fibre fabric TPE-C1. Diameter at the top approx. 1000 mm, with reinforced edge, eyelets and plastic pulling rope of 1000 mm. With tightly fitted threaded connection DN 50 with Viton sealing at the lower end.
Weight: 3 kg

.....43490



Set of containers

Stainless steel, round, total volume approx. 2500 l. With reinforced edge as carrying handle. Consisting of 5 containers, one piece each of size 930x800, 930x820, 930x840, 930x860 and 930x880 mm (external dim.)
Weight: 120 kg

.....65108

Set of lids

Stainless steel, for set of round containers, with carrying handles.
Weight: 15 kg

.....65109

Bag

PVC, for round containers of stainless steel. Largely resistant to acids and alkalis, thickness of material 0.6 mm, with pulling cord.
Dim. (LxWxH): 950x950x1100 mm

.....65105

Hand scoop 1 l*

Stainless steel. Handle 440 mm long, with hand guard.
Ø 160 mm.
Weight: 0.8 kg

.....56868

Scoop 5 l*

Stainless steel. Handle 1200 mm long, with hand guard.
Ø 260 mm.
Weight: 2.5 kg

.....63878

* = not illustrated



COLLECTING CONTAINERS SAMPLING SET

Bag "Responder"*

Made of multi-layer film foil material with a very high resistance to chemicals, suitable to set of stainless steel containers, art.no. 65108
.....**65028**

Sucker carrying handle*

(1 pair), adheres to all smooth surfaces due to the vacuum of the two suction cups. Carrying force 80 kg. Yellow plastic handle with 2 suction cups, diameter 120 mm
.....**65112**

Can 20 l*

Stainless steel. Screw plug secured by chain.
Weight: 4 kg
.....**56814**

Pourer*

Stainless steel, for can, art.no. 56814
.....**56815**



Can 60 l

Made of low-pressure polyethylene, stackable, blue.
Dim. (LxWxH): 400x330x620 mm
Weight: 3 kg
.....**63876**

Collecting container

Made of low-pressure polyethylene, approx. 220 l, with reinforced edge, stackable.
Dim. (LxWxH): 900x540x700 mm
Weight: 11.7 kg
.....**63874**

Equipment for collecting and storing, please see page 44 onwards.



Sampling devices

Box for sampling set

Lid made of PE.
Dim. (LxWxH): 525x455x220 mm
.....**65107**

Universal indication paper

4.8 m, rolled in can, for determining various chemicals.
Weight: 0.04 kg
.....**58790**

Oil test paper

for determining oil in water or soil. When in contact with gasoline or oils the paper takes on a deep violet colour
.....**62181**

Bottle for chemicals

100 ml, with screw lid, brown glass
.....**88214**

Set of spoons

Chrome-nickel steel 18/8, 4301, consisting of 3 spoons of various sizes
.....**88215**

Spray bottle

Polyethylene, filled with distilled water, contents 500 cm³.
Dim. (ØxL): 78x155 mm
.....**88216**

Wide-neck bottle

Polyethylene, volume 250 cm³.
Dim. (ØxH): 64x113 mm
.....**88200**

Wide-neck bottle

Polyethylene, volume 1000 cm³
.....**88217**

Ethyl alcohol

500 ml, in bottle
.....**88201**

Package of filtering paper

100 pcs., Ø 11 cm
.....**88202**

Flask sampler

with fine spigot, for air samples. Volume 100 ml
.....**88218**

Gas collecting bag

5.5 l, with fill hose
.....**65088**

Tube of water detecting paste

Weight: 0.15 kg
.....**63891**

Set of adhesive labels

100 pcs.
.....**65090**

Marking pencil

Not water-soluble
.....**65113**



Sampling spoon 0.5 l

with 2-part aluminium handle. Length: 2.3 m
.....**65089**



Digital pH meter, battery powered with 9 V battery, complete with pH electrode, buffer solution set (consisting of 2 buffer capsules GPH 4.0 and GPH 7.0) as well as 2 plastic bottles at 100 ml. In box with cellular rubber lining.
Measuring range (device): 0.00 ... 14.00 pH
Resolution: 0.01 pH.
Dim. of box (LxWxD): 600x360x85 mm
Weight: 1.1 kg
.....**63884**

Manual "Hommel-Handbuch der gefährlichen Güter"
Complete works, consisting of Volume 1 - 4, pages 1 - 1612, list of synonyms/explanations, transport and danger classes
.....**67110**

Orders for separate parts of the Hommel manual

List of synonyms/explanations*
.....**67099**

Volume I.....**67100**
Volume II.....**67101**
Volume III.....**67104**
Volume IV.....**67108**

Transport and danger classes*
.....**67103**

PLEASE NOTE:
Manuals and data bases on this page are available in German language only!



Manual "Gefahrgut-Ersteinsatz"
for accidents with hazardous materials by Dr. H.-D. Nüßler. The German edition of "EMERGENCY RESPONSE GUIDE BOOK for Hazardous Incidents" by the U.S. Ministry of Transport, adapted by Dr. Nüssler, senior fire chief, together with other fire fighting experts and chemists. The book states the German names of the various agents or the haz.-mat. sign via the UN-nos., the most important risks and the measures for first intervention as well as the areas of evacuation.
DIN A 4 with spiral binding
.....**67107**

Resistance lists*
for the equipment stored in a haz-mat vehicle of type GW-G. This list is compiled in conformity with the corresponding equipment of a certain vehicle and informs on the resistance of the individual pieces of equipment to approx. 1500 agents.
Dim. (LxWxH): 350x300x350 mm
.....**67111**

Keudel haz-mat data base*
for fire brigades and rescue services, with well-proven information. On request supplemented by the module MET (model for the effects of toxic gases).
• Compiled by well-known experts.
• Quality certificate DIN EN ISO 9001.
• With insurance coverage in case of data errors.
• Annual updating since 1987.
• First place at the data base comparison by the Bundesamt für Zivilschutz (Federal office for Civil Protection) in 1997.

"Gefährliche Stoffe/Feuerwehr"

This data base offers an adaption (especially for the fire services) of the chemical and physical material data considering the aspects "description of risks" and "elimination of risks".

- Measures to be taken in case of leakage and fire with information on breathing and body protection.
- Resistance of protective suits and material.
- Binding and extinguishing agents.
- Test tubes.
- Manufacturers and TUIS addresses.
- Bibliographical references.

Conditions for hardware and software acc. to the Microsoft® recommendations for Windows® 3.1/3.11/95/NT. Authors: Gernot Schneider, Fire Chief of the professional fire brigade in Freiburg; Winfried Kilb, Niedernhausen; Dipl.-Ing. Adolf Fleck and Dipl.-Ing. Andreas Wilhelm from the fire fighting school Baden-Württemberg in Bruchsal. Scientific consultants: Prof. Dr. Klaus D. Pohl and Dipl.-Chem. Andreas Wieneke, university of Wuppertal
.....**58960**

"Gefährliche Stoffe/Rettungsdienst"

This module comprises the most important information on care and therapy of injured and contaminated persons within the rescue chain of qualified first-aid helper, rescue service, first-aid doctor and hospital. Authors: Dr. med. Dipl.-Chem. Richard Spörri and Roland Walther
.....**58962**

"Gefährliche Stoffe"/SISy Strahlenschutzinformation*

is an integrated part of "Gefährliche Stoffe/Feuerwehr" and "Gefährliche Stoffe/Rettungsdienst". Offers a list of physical data and administrative limit values as well as the calculation of dosimetric sizes required for evaluation of a radiation risk. Author: Dipl.-Ing. Henri W. Graffunder.

Supplementary module "MET"

Model for Effects of Toxic gases. For the file "Gefährliche Stoffe". This module makes an immediate evaluation of the effect of toxic gases on persons staying outdoors or indoors possible. Authors: Prof. Dr. sc. nat. Peter Bützer and Dr. sc. nat. Ivo Silvestri

.....**58963**

* = not illustrated



MEASURING DEVICES FOR HAZ-MAT OPERATIONS



Time measuring device Compact II

Functions: Stop clock, countdown with alarm, time (24 hours), date.

Dim. (LxWxH): 64x60x16 mm

Weight: 40 g

.....88206

SILVA Windwatch

for measuring the wind velocity (in mph, knots, Beaufort, km/h, m/sec.) and wind direction. Indication of temperature in °C (-20 up to 55°C) or °F (-4 up to 131°F) and the wind chill data, together with a compass easy determination of the wind direction.

Life of the battery approx. 4 years or 100.000 measurings, each of 1 min.

Dim. (LxWxH): 100x40x18 mm

Weight: 42 g

.....63936

SILVA reflecting compass 25 TD-CL/E

Suitable for position finding and map-planning. Handy compass housing with a new easily legible graduation ring. Incl. gradiometer and battery powered light for position finding during night-time. Incl. compass case (can be fixed e.g. on a belt).

Dim. (WxH): 108x64 mm (with closed lid)

.....63939



Manual anemometer

Indication range 0 - 30 m/sec., graduated in 1/1 m/sec, also showing the wind velocity in Beaufort. Black, scale white, screw-off handle.

Dim. (ØxH): 100x210 mm

Weight: 0.3 kg

.....63961

Wooden case

for smooth transport of the manual anemometer, art.no. 63961.

Dim. (LxWxH): 245x130x120 mm

Weight: 0.7 kg

.....88231

DRÄGER simultaneous test

The simultaneous test set is based on Dräger tubes and is an excellent support for a quick decision on evaluating and limiting dangers. After just a few minutes you will know what gases you have to deal with. Due to simultaneous measuring of several gases/steams

- the measuring time is shortened considerably and
- the information on "cross evaluations" is available simultaneously.

Each simultaneous test set consists of 5 Dräger test tubes arranged in parallel in a rubber sleeve. The tube flow line coordination is such that the same volume of air flows through all the tubes at the measuring.

The simultaneous test set is available in four different versions:



Simultaneous test set I

for inorganic conflagration gases:

- acid gases (hydrochloric acid)
- hydrocyanic acid
- carbon monoxide (CO)
- basic gases (ammonia)
- nitrous gases (nitrogen oxide)

.....58965

Simultaneous test set II*

for inorganic conflagration gases:

- sulfur dioxide
- chlorine
- hydrogen sulfide
- carbon dioxide
- phosgene

.....58966

Simultaneous test set III*

for organic fumes:

- ketones (acetone)
- alcohol (methane)
- aromatic compounds (toluene)
- aliphatic hydrocarbons (hexane)
- chlorated hydrocarbons (perchloroethylene)

.....58967

Simultaneous test set indicator substances*

- carbon monoxide (CO)
- hydrocyanic acid
- hydrochloric acid
- nitrous gases
- formaldehyde

.....58968

Adapter for simultaneous test set

for the combination with gas detector pump ACCURO

.....58644

GAS DETECTOR PUMP TEST TUBES CHIP MEASURING SYSTEM



DRÄGER gas detector pump ACCURO

Always ready for use, easy handling. Proven one-hand bellows pump, with integrated squeeze counter and test tube holder. At each squeeze 100 cm³ of air is delivered.

A detailed test tube handbook is included. At present approx. 200 test tubes for various gases and fumes are available. A detailed list is supplied on request. The test tubes are not included, they must be ordered separately.

Dim. (LxWxH): 170x45x85 mm
Weight: 0.25 kg

.....58897

Extension hose*

with test tube holder. For measuring in inaccessible places. With separate bag.

Length: 3 m

.....58898

Bag*

for gas detector pump ACCURO

.....58899

Set of spare parts*

for gas detector pump ACCURO

.....58895

DRÄGER test tubes

Set of DRÄGER test tubes*

DIN 14555-12-13-14, with 17 various packages of test tubes, each of 10 pcs., for analysis of gas and air

.....59080

The set of test tubes consists of

Alcohol 100/a*

Range of measurement
100 - 3000 ppm.....59040

Ammonia 5/a*

Range of measurement
5 - 70 ppm.....59041

Hydrocyanic acid 2/a*

Range of measurement
2 - 30 ppm.....59042

Chlorine 0.3/b*

Range of measurement
0.3 - 5 ppm.....59043

Carbon dioxide 0.1%/a*

Range of measurement
0.1 - 1.2 Vol. %
0.5 - 6 Vol. %.....59044

Carbon monoxide 10/b*

Range of measurement
10 - 300 ppm
100 - 3000 ppm.....59045

Hydrocarbons 0.1%/b*

Range of measurement
0.1 - 1.3 Vol. %.....59046

Nitrous fumes 0.5/a*

Range of measurement
0.5 - 10 ppm.....59057

Phenol 1/b*

Range of measurement
1 - 20 ppm.....59058

Phosgene 0.02/a*

Range of measurement
0.02 - 0.6 ppm.....59048

Phosphine 0.01/a*

Range of measurement
0.01 - 0.3 ppm
0.1 - 1 ppm.....59059

Hydrochloric acid 1/a*

Range of measurement
1 - 10 ppm.....59049

Sulphur dioxide 1/a*

Range of measurement
1 - 25 ppm.....59060

Hydrogen sulphide 1/c*

Range of measurement
10 - 200 ppm.....59052

Trichloroethylene 2/a*

Range of measurement
2 - 50 ppm
20 - 250 ppm.....59061

Vinyl chloride 1/a*

Range of measurement
1 - 10 ppm
5 - 50 ppm.....59055

Polytest*

Qualitative measuring range.....59056

Also available:

Oxygen 5%/B*

(8 pcs.) Range of measurement
5 - 23 Vol. %.....59050

DRÄGER Chip Measurement System CMS

The **CMS** is one of the most accurate and reliable spot measuring systems. It consists of a substance-specific chip and an analyzer. The interaction between the various chips and the analyzer is controlled by the chip bar code. The bar code contains all the essential information such as gas type, measurement range and other parameters needed for the measurement evaluation.

The intelligent combination of electronics, mechanics, optics and software makes the **CMS** one of the most exact and handy measuring systems.

Accuracy by means of the mass flow control and the opto-electronic evaluation with digital readout.

Reliability by means of an automatic system test, calibrated chips that can be used for up to two years and a rugged analyzer.

Simple handling. Straightforward menu commands in the display and one-switch operation further simplify the measurement procedure. With text in various languages.

Efficient. Short training time only. Time saving through short measuring times, no calibration and high flexibility.

Harmless to the environment by means of very low amount of chemical reagents, recycling of the chips by DRÄGER.

The **integrated data recorder** offers further advantages:

- Automatic storing of up to 50 measuring results.
- The most important information is thus available at a later date.

* = not illustrated

Some articles may not be available in specific countries. Details on request.



CHIP MEASURING SYSTEM AND ACCESSORIES



CMS analyzer set

with integrated data recorder. Leather case also for chips and batteries. Protection class IP 54 (dust and spray water protection). Approvals: BVS Europe, protection class EEx ib II CT4. Dim. (LxWxH): 205x92x45 mm Weight: 0.8 kg

.....59090



Remote system

for measurement in inaccessible places, incl. 3 m extension hose

.....59091



Telescopic probe

Metal, extensible up to 1.1 m

.....58872

Extension hose, 3 m*

.....59092

CMS chips

Training simulation*

.....59120

Ammonia*

Measuring range 2 - 50 ppm 59093

Measuring range 10 - 150 ppm ...59094

Petroleum hydrocarbons*

Measuring range 20 - 500 ppm ..59108

Measuring range
100 - 3000 ppm.....59121

Benzene*

Measuring range 0.2 - 10 ppm ...59095

Measuring range 0.5 - 10 ppm ...59109

Measuring range 10 - 250 ppm
.....59141



Hydrocyanic acid

Measuring range 2 - 50 ppm

.....59096

Chlorine*

Measuring range 0.2 - 10 ppm

.....59097

Ethanol*

Measuring range 100 - 2500 ppm

.....59142

i-propanol*

Measuring range 40 - 1000 ppm

.....59143

Carbon dioxide*

Measuring range 1000 - 25000 ppm

.....59098

Carbon dioxide*

Measuring range 200 - 3000 ppm

.....59122

Carbon dioxide*

Measuring range 1 - 20 Vol.% 59123

Carbon dioxide*

Measuring range 5 - 150 ppm 59099

Mercaptan*

Measuring range 0.25 - 6 ppm ...59144

Methanol*

Measuring range 20 - 500 ppm ..59145

Nitrous fumes*

Measuring range 0.5 - 15 ppm ...59100

Measuring range 10 - 200 ppm ..59124

Perchloroethylene*

Measuring range 5 - 150 ppm 59101

Phosgene*

Measuring range 0.05 - 2 ppm ...59146

Phosphine*

Measuring range 1 - 25 ppm 59147

Measuring range 20 - 500 ppm ..59148

Measuring range 200 - 5000 ppm
.....59150

Propane/butane*

Measuring range 100 - 2000 ppm

.....59151

Hydrochloric acid*

Measuring range 1 - 25 ppm 59102

Measuring range 20 - 500 ppm ..59103

Sulphur dioxide*

Measuring range 0.4 - 10 ppm ...59104

Measuring range 5 - 150 ppm 59125

Hydrogen sulphide*

Measuring range 2 - 50 ppm 59105

Measuring range 20 - 500 ppm ..59106

Measuring range 100 - 2500 ppm
.....59126

Nitrogen dioxide*

Measuring range 0.5 - 25 ppm ...59107

Toluene*

Measuring range 10 - 300 ppm ..59127

Vinyl chloride*

Measuring range 0.3 - 10 ppm ...59128

Measuring range 10 - 250 ppm ..59110

o-Xylene*

Measuring range 10 - 300 ppm

.....59129

Some articles may not be available in specific countries. Details on request.

* = not illustrated

EX MEASURING DEVICES AND ACCESSORIES GAS DETECTION BOX



DRÄGER-PAC-EX

Pocket-size measuring instrument with extraordinary features for monitoring of combustible gases or vapours in ambient air.

- Adaptable to various applications due to individual ex-calibration.
- Push buttons can be controlled also with gloves.
- The alarm signal is extremely loud and can be heard far away.
- Illuminated display; the dates can be read also in the dark.
- Three measuring ranges with autoranging function.
- Four adjustable alarm thresholds.
- Rugged housing. In spite of its low weight it can withstand great mechanical loads.
- Alarm in case of low battery charge or malfunction.
- For use as measuring as well as warning apparatus.

Standard measuring range:

0 - 100% UEG

0 - 5 Vol.-% CH₄ (methane)

5 - 100 Vol.-% CH₄ (methane)

Power supply: NiCd battery
replaceable

Ingress protection: IP 55 (certified by
TÜV Südwest)

Approval: BVS Ex s II CT4.

Dim. (LxWxH): 142x66x27 mm

Weight: 0.37 kg

.....58823



Charging module

for 2 Pac-Ex

.....58824

Power pack 230 V/50 Hz

for max. 4 charging modules for 2 units

.....58826



Plug-in charger 230 V/50 Hz for charging module for 2 units

.....58862



Car and single charger

"Standard" for Pac-Ex, consisting of:
single charging module and car
adapter (12/24 V)

.....58831



Leather bag*

for Pac-Ex, shoulder bag.
(Pac-Ex is completely covered)

.....58828

Belt bag*

for Pac-Ex

.....58830

Hand pump*

for Pac-Ex

.....58833

Pump adapter*

for connection to the hand pump

.....58867

Telescopic probe*

Complete with accessories, consisting of:

- Telescopic probe, extensible up to 1.1 m
- Hand pump
- Pump adapter
- Hoop for the telescopic probe

.....58875

Float probe, hose for float probe,
Viton hose, plastic telescopic probe
(air), metal telescopic probe - please
see page 21, accessories for MULTI-
WARN II.



DRÄGER gas detection box

Empty, for gas detecting and
measuring apparatus and 18 types
of test tubes. Portable mini-laboratory
for detection of hazardous gases and
determination of an explosion risk as
well as lack of oxygen.

Dim. (LxWxH): 400x350x220 mm

Weight: 6 kg

.....63921

Kit for gas detection box

Consisting of:

- 8 bottles for smell and soil samples
- Spoon
- Universal indication paper
- Check list and information

.....58827

* = not illustrated



EX MEASURING INSTRUMENTS AND ACCESSORIES

DRÄGER gas detection instrument MULTIWARN II

The MULTIWARN II series represents the ideal solution when it comes to monitoring the concentration of several gases simultaneously and continuously.

Depending on the task you may choose from various combinations with an infrared sensor, an EX-sensor and up to three electrochemical sensors.

The ideal instrument for versatile and sophisticated tasks, for instance

- for use by fire brigades
- in the petrochemical industry
- in the chemical industry
- in gas and water works.

If required an internal heavy-duty flow controlled pump can be chosen. For use in areas with risk of explosions an easily exchangeable heavy-duty NiCd rechargeable battery with indication of charging level or an alkali charging unit for customary alkali batteries are available.

Dim. (WxHxD): 55x110x65 mm
Weight: 1 kg

MULTIWARN II Basic

with maximum **one** catalytic Ex-sensor and **three** electrochemical sensors.

The unit can be equipped with data memory and/or internal pump (incl. pump adapter, water and dust filter).

Multiwarn II BP*

(Basic instrument with pump) incl. display, visual and audible alarms, keyboard, flow-controlled internal pump, pump adapter, water filter, carrying straps and user's manual (without rechargeable batteries, sensors and language module)

.....59216

Multiwarn II BD

(Basic diffusion instrument) incl. display, visual and audible alarms, keyboard, carrying straps and user's manual (without rechargeable batteries, sensors and language module)

.....59215



MULTIWARN II Standard

with maximum **one** infrared sensor, **one** catalytic sensor and **three** electrochemical sensors. The unit can be equipped with data memory and/or internal pump (incl. pump adapter, water and dust filter).

Multiwarn II SD*

(Standard diffusion instrument) incl. display, visual and audible alarms, keyboard, carrying straps and user's manual (without rechargeable batteries, sensors and language module)

.....59217

Multiwarn II SP*

(Standard instrument with pump) incl. display, visual and audible alarms, keyboard, flow-controlled internal pump, pump adapter, water filter, carrying straps and user's manual (without rechargeable batteries, sensors and language module)

.....59218

NiCd charger*

with intelligent charging electronic system for operation of three high-energy consumers (infrared sensor, catalytic Ex-sensor and internal heavy-duty pump) and four low-energy consumers (three electrochemical sensors and electronic system). Operation period: 8 - 12 hours

.....59219

Alkali charger*

.....59220

Alkali battery (baby) T 4*
for alkali charger

.....59221

Language modules on request.

Some articles may not be available in specific countries. Details on request.

Sensors for MULTIWARN II Standard

IR-CO₂ 25 carbon dioxide*

Measuring range 0 - 25 Vol. %

.....59225

IR-EX*

Measuring range 0 - 100 Vol. % CH₄

0 - 100% LEL 59226

Sensors for MULTIWARN II Standard and Basic

Cat-Ex sensor*

Measuring range 0 - 100% LEL

.....59227

O₂-LS oxygen*

Measuring range 0 - 25 Vol. %

.....59228

CO carbon monoxide*

Measuring range 0 - 500 ppm

.....59229

H₂ S 100 hydrogen sulfide*

Measuring range 0 - 100 ppm

.....59230

H₂ S 500 hydrogen sulfide*

Measuring range 0 - 500 ppm

.....59231

NO nitrogen monoxide*

Measuring range 0 - 100 ppm

.....59232

NO₂ nitrogen dioxide*

Measuring range 0 - 20 ppm

.....59233

SO₂ sulphur dioxide*

Measuring range 0 - 20 ppm

.....59234

NH₃ ammonia*

Measuring range 0 - 300 ppm

.....59235

HCN hydrocyanic acid*

Measuring range 0 - 50 ppm 59236

Cl₂ chlorine*

Measuring range 0 - 10 ppm 59237

OV ethylene oxide*

Measuring range 0 - 50 ppm 59238

OV-A*

Measuring range 0 - 50 ppm 59239

Hydride (PH₃ etc.)*

Measuring range 0 - 1 ppm 59240

* = not illustrated

ACCESSORIES FOR EX MEASURING INSTRUMENTS RADIATION DOSE RATE MEASURING SYSTEMS



PH₃ 500 Phosphine*
Measuring range 0 - 500 ppm
.....**59241**

CO₂ carbon dioxide*
Measuring range 0 - 5 Vol.%
.....**59242**

The above sensors are preset with the standard measuring range and installed into the device in case of an order.

An order for a MULTIWARN measuring device consists of the following parts:

- The unit (Basic or Standard)
- Language module incl. program
- Charging unit
- Sensors

Accessories for MULTIWARN II

Single charger 230 V*
for Multiwarn II
.....**58871**

Car charging unit 12/24 V
for Multiwarn II
.....**58876**



Adapter for car charging unit 12/24 V*
.....**58877**

Float probe
(without hose), for suction of standing water in pits
.....**58834**

Hose for float probe (per metre)
Electrically conductive (not for H₂S). Please state length when ordering.
.....**58835**

* = not illustrated



Viton hose (per metre)*
Resistant to solvents.
Please state length when ordering
.....**58836**

Telescopic probe*
Plastic, extensible up to 1.15 m, in plastic case
.....**58816**

Telescopic probe*
Metal, extensible up to 1.1 m
.....**58872**

Leather bag*
for Multiwarn II**58873**

Radiation dose rate measuring systems, GRAETZ

Dose rate measuring system X 50 DE
for measuring gamma radiation and X-rays according to DIN 6818. With built-in GM tube, large digital dose rate indication on LC-display (illuminable), additional quasi analogous dose rate indication as "pointer" instrument. Automatic switching of indication ranges, microprocessor electronics with self-test, large size function buttons, dose rate indication reacting quickly to changing dose rates, mean value can be faded out, dose rate alarm threshold, switchable acoustic single-pulse indication, decontaminable housing. With a variety of attachable external probes for the expansion of operating scope, e.g. for dose rate measurements up to 10 Sv/h, for detection of alpha, beta, gamma contamination, for checking of liquids, automatic probe recognition, directly to be combined with telescope probe through row of contacts (at rear of housing).

Some articles may not be available in specific countries. Details on request.

Continuous battery check, sealed for submersion up to 1 m depth, EMV/NEP-proof.
Approval for the fire services: DL/FW/GSF 058810.

Technical data:

Nominal photo energy range:
45 keV - 2 MeV
PTB measurement range:
100 µSv/h - 1 Sv/h
Type of GM tube: ZP 1310 (18509)
Dose rate alarm threshold: 25 µSv/h
Approved for official calibration by PTB: 23.01/88.01
Power supply: 9 V energy block, approx. 350 hours.
Dim. (WxHxD): 82x152x39 mm
Weight: 0.4 kg (without battery)

.....**88095**



Dose rate measuring system X 5 DE*

As art.no. 88095 above.
Approval for the fire services: DL/FW/GSF 029012.

Technical data:

Nominal photo energy range:
48 keV - 1.3 MeV
PTB measurement range:
1 µSv/h - 20 mSv/h
Type of GM tube: ZP 1200 (18503)
Dose rate alarm threshold: 7.5 µSv/h
Approved for official calibration by PTB: 23.01/88.09.
Dim. (WxHxD): 82x152x39 mm
Weight: 0.4 kg (without battery)

.....**88080**



High-dose probe 18529 DE*

DIN 6818, automatic probe recognition by the basic instrument.

Connection to the basic instrument either directly or through a cable of up to 100 m length.

Approval for the fire services: for X 50 DE or X 5 DE.

Technical data:

Energy range: 80 keV - 2 MeV

Measuring range/decades:

500 μ Sv/h - 9.99 Sv/h/6 decades

PTB approval: 23.22/89.04

.....88098



Telescope probe DE

Dose rate measurement acc. to DIN 6818.

Measuring of high dose rates from a safe distance. Simple adaptation to basic unit (X 50 DE or X 5 DE) by snap-in technique. Variably extensible up to 4.30 m. Stainless steel telescope; built-in low and high dose GM tube; dose rate measurable up to 10 Sv/h; automatic change of measurement range; no separate batteries for telescope probe necessary, voltage supply from basic unit.

Approval for the fire services: DL/FW/GSF 068911.

Technical data:

Energy range:

Low dose probe: 60 keV - 1.3 MeV

High dose probe: 60 keV - 3 MeV

PTB measuring range:

1.5 μ Sv/h - 10 Sv/h

Type of GM tube:

ND ZP 1400 (18504)

HD ZP 1300 (18529)

Dose rate alarm threshold:

same as in basic unit

PTB approval: 23.22/89.06.

Dim (WxHxD): 120x920(4300)x80 mm

Weight: 2.6 kg

.....88097

Aluminium case

for telescope probe DE incl. basic unit and accessories.

Dim. (WxHxD): 180x850x135 mm

Weight: 3.5 kg

.....88147

Probe cable D

Length: 1.25 m

.....88099

Electronic dosimeter

with warning functions **EDW 150 F**.

Dosimeter for gamma radiation and X-rays according to DIN 6818. Small and handy; digital dose indication on LC-display (67 digits); measurement of radiation in front of the user in a solid angle of 180° due to uniquely shaped housing; 5 selectable dose warning thresholds; 2 selectable dose rate warning thresholds. For safety reasons the dose measurement cannot be switched off. Storage of dose value for up to approx. 12 hours with removed batteries.

Protection class IP 67.

Approval for the fire services:

DW/FW/IdF 04 94 10.

Technical data:

Nominal energy range: 75 keV - 3 MeV

PTB measuring range: 5 μ Sv - 10 Sv

Type of GM tube:

C 300 (Centronic)

Dose rate alarm thresholds:

25 μ Sv/h/1 Sv/h

Dose alarm thresholds:

5, 15, 50, 100, 250 mSv

Power supply:

3 lady cells LR 1, 1.5 V.

Dim. (WxHxD): 40x136x17 mm

Weight: 0.16 kg

.....88081



Dose rate measuring system X 5 C

for measuring gamma radiation and X-rays according to DIN 6818. Built-in GM tube. Large digital dose rate indication on LC display (illuminable); optional dose rate indication or dose indication with integration time; additional quasi analogous dose rate indication on three decades of logarithmic bar indication. Indication of the dose rate peak value and the dose rate average value. 4 free programmable dose alarm and dose rate alarm thresholds. Automatic or manual storing of dose rate measuring values with date and time; menu-controlled operation, in part protected by pass-word. The housing can easily be decontaminated. Sealed for submersion of up to 1 m depth. (IP 67) RS 232 interface. Approval for the fire services is applied for.

Technical data:

Energy range: 40 keV - 1.3 MeV

Dose rate indication range:

1 μ Sv/h - 20 mSv/h

Dose indication range: 1 μ Sv - 10 Sv

Dose rate alarm thresholds:

4 free programmable,

1 μ Sv/h - 20 mSv/h

Dose alarm thresholds:

4 free programmable, 1 μ Sv - 10 Sv

Power supply:

9 V energy block 6 LR 61.

Dim. (WxHxD): 82x152x39 mm

Weight: 0.4 kg

.....88082

Dose rate alarm device GAMMATEST 1

DIN 6818, for the safety of persons staying in a place endangered by gamma radiation and X-rays. With 4 adjustable alarm thresholds. When a set alarm threshold is reached, an acoustic alarm is triggered (75 dB, measured at a distance of 1 m). Approval for the fire services: DLW/FW/GSF 127702/2.

Technical data:

Energy range: 48 keV - 2 MeV
Alarm thresholds:
0.025 - 0.05 - 1 - 10 mSv/h
PTB approval: 23.03/83.30
Power supply:
2 round cells IEC R 6.
Dim. (WxHxD): 72x125x26 mm
Weight: 0.23 kg

.....88144



Dose measuring and alarm device TDW 100 F

(Alarndosimeter) for measuring the personal dose and as a dose alarm device for gamma radiation and X-rays. Approval for the fire services: DW/FW/GSF 037903/2.

Technical data:

Energy range: 83 keV - 2 MeV
Dose alarm thresholds:
5 mSv, 15 mSv, 100 mSv, 250 mSv
Power supply:
2 round cells IEC R 6.
Dim. (WxHxD): 72x125x26 mm
Weight: 0.23 kg

.....88142

Evaluation and programming unit AG 02 TDW

for TDW 100 F.
Approval for the fire services:
DW/FW/GSF 048005.
Dim. (WxHxD): 110x188x60 mm
Weight: 0.6 kg

.....88143



Dose film cassette

(Filmdosimeter) without film with steel clip, orange. Standard version for gamma radiation and X-rays. The film can be obtained and evaluated by the official institutes for personal dose measurement.

Dim. (WxHxD): 42x53x8 mm
Weight: 0.014 kg

.....88125

Radiation measuring instruments AUTOMESS

Dose rate measuring device 6150 AD

Universal radiation measuring device for alpha, beta, gamma radiation and X-rays, with internal tube and tube probes. Parallel coverage of dose rate, dose, average value and peak value of dose rate, with read-back LC-display. Automatic switching on and changing of the ranges and units, even during probe operation. Adjustable alarm thresholds. Computer controlled compensation of the tube tolerances: Very high measuring accuracy even when devices and probes are changed. Extremely low power consumption: 1000 hours with a 9 V battery (IEC 6 LR 61). Aluminium diecast housing, watertight. Approved for calibration. Validity of calibration: 6 years. Dim. (WxHxD): 80x130x29 mm
Weight: 0.4 kg



Four different types are available (only together with gamma probe 6150 AD-15, art.no. 88109):

Dose rate measuring device 6150 AD-1

Dose rate: 0.2 - 999 mSv/h
Dose: 5 µSv - 9.99 Sv
5-step dose rate alarm threshold, adjustable.
Approval for the fire services:
DL/FW/GSF 128206

.....88107

Dose rate measuring device 6150 AD-2

Dose rate: 0.5 µSv/h - 9.99 mSv/h
Dose: 5 µSv - 99.9 mSv
5-step dose rate alarm threshold, adjustable.
Approval for the fire services:
DL/FW/GSF 128207
(illustrated on page 24)

.....88108

Dose rate measuring device 6150 AD-5*

Dose rate: 0.2 - 999 mSv/h
Dose: 0.05 µSv - 9.99 Sv
Dose rate and dose alarm thresholds freely programmable, indication of the standard deviation in per cent.
Approval for the fire services:
DL/FW/IdF 059517

.....88110

Dose rate measuring device 6150 AD-6*

Dose rate: 0.5 µSv/h - 9.99 mSv/h
Dose: 0.05 µSv - 99.9 mSv
Dose rate and dose alarm thresholds freely programmable, indication of the standard deviation in per cent.
Approval for the fire services:
DL/FW/IdF 059518

.....88111

* = not illustrated



RADIATION DOSE RATE MEASURING SYSTEMS AND ACCESSORIES

Gamma probe 6150 AD-15

High dose rate probe.
Dose rate: 0.01 mSv/h - 9.99 Sv/h
Dim. (LxØ): 135x40 mm
Weight: 0.08 kg
(illustrated on page 23)

.....88109

Probe cable 700.1.6

for connecting the probe to the dose rate measuring device 6150 AD.
Length: 1.25 m
Weight: 0.09 kg
(illustrated on page 23)

.....88103

Belt bag 700.1.121*

with window for dose rate measuring device 6150 AD.
Weight: 0.05 kg

.....88105

Bag, artificial leather 700.1.1*

for 1 dose rate measuring device 6150 AD, gamma probe 6150 AD-15 and probe cable.
Dim. (LxWxH): 205x195x63 mm
Weight: 0.5 kg

.....88106



Contamination detection probe 6150 AD-k

for connection to the dose rate measuring device 6150 AD of any version. Closed tube, no gas flushing, ready for immediate use.
Tube window: 170x100 mm, 2 mg/cm²
2 types of operation: "Alpha" and "Alpha/Beta/Gamma"
Measuring range: up to 20000 s-1.
The adjustable probe handle can be extended.

Attention: Art.no. 88114 does not include dose rate measuring device 6150 AD!

Dim. (LxWxH): 210x120x90 mm
Weight: 1.3 kg

.....88114

Handle extension 770.1-60*

Length: 770 mm
Weight: 0.5 kg

.....88126

Tube extension 770.1-70*

Several extensions can be put together.

Length: 775 mm
Weight: 0.5 kg

.....88127

Test radiation emitter 6708*

1 kBq Am241, 2 kBq Sr90, for test measurements on 6150 AD-k.
Weight: 0.01 kg

.....88128

Aluminium case 6605 K*

for 6150 AD-k, 6150 AD-15 and probe cable.
Dim. (LxWxH): 350x400x110 mm
Weight: 3 kg

.....88117



Teletector probe 6150 AD-t

for plugging onto a dose rate measuring device 6150 AD. Radiation measuring device with tube telescope probe for gamma radiation and X-rays. Detection of beta radiation. Safety through distance: Telescope probe extensible up to 4.12 m. Measuring ranges:
Dose rate: µSv/h - 9.99 Sv/h
Dose: 5 µSv - 9.99 Sv
Beta detection in range up to 10 mSv/h
Approved for calibration.
Validity of calibration: up to 6 years.
Approval for the fire services: DL/FW/GSF 128608 (only together with a dose rate measuring device 6150 AD)

Attention: Art.no. 88100 does not include dose rate measuring device 6150 AD!
Dim. (LxWxH): 910-4120 mm (depending on extension) x130x90 mm
Weight: 3 kg

.....88100

Probe cover 6112 B-142*

for the teletector telescope.
Weight: 0.2 kg

.....88115

Aluminium case 6112 B-150*

for 1 Teletector probe 6150 AD-t and 1 dose rate measuring device 6150 AD
Dim. (LxWxH): 752x175x125 mm
Weight: 3.2 kg

.....88101



Dose rate alarm device 6126

for gamma radiation and X-rays, with tube. Acoustic alarm threshold adjustable to 25 µSv/h, 1 mSv/h or 10 mSv/h. Easy to handle, small, light-weight and rugged.

Approval for the fire services: DLW/FW/GSF 027201

Power supply:

9 V battery IEC 6 LR 61.

Dim. (LxWxH): 140x60x30 mm

Weight: 0.22 kg

.....88133

Alarm dosimeter ADOS-F

with tube for gamma radiation and X-rays. For the safety of task force in disaster control.

Dose alarm threshold 5, 15, 100, 250 mSv. Indication of the set threshold, read-back display of the remaining time until the threshold is reached.

Dose range 0.005 mSv to 9999 mSv. Read-back dose indication. Rugged watertight aluminium cast housing. Approval for the fire services: D/FW/GSF 109009

Power supply:

9 V battery IEC 6 LR 61.

Dim. (WxHxD): 60x97x23 mm

Weight: 0.2 kg

.....88134

Test radiation emitter

6706/6706-1

Gamma radiation source for function and calibration tests of radiation dose rate measuring devices.

Nuklid Cs-137/333 kBq.

Approval for calibration test for:

Dose rate measuring device 6150 AD 1/2/5/6,

Gamma probe 6150 AD-15 and

Teletector probe 6150 AD-k.

Weight: 1.6 kg

.....88121

Radiation dose measuring devices and accessories

Make ESM EBERLINE

Contamination measuring device

CONTAMAT FHT 111 M

Measuring device for detection and evaluation of surface contamination by alpha, beta and gamma radiation. Also suitable for detection of tritium.

Spraywater-tight housing. Tube with fine-meshed grid. Analogous and digital measuring data indication with automatic measuring range switch-over. The large control panel can be operated even with gloves.

If one of the two adjustable alarm thresholds is exceeded, a visual as well as an audible alarm is triggered.

Indication range: 0 - 19.999 s-1

Power supply:

5 baby cells 1.5 V IEC R 16, sufficient for approx. 150 hours of continuous operation.

Approval for the fire services:

K/FW/GSF 058807/1.

Dim. (LxWxH): 210x135x115 mm

Weight: 1.5 kg

.....88156



Butane flow tube

with additional protective grid.

Size of window: 166 cm², for alpha and beta radiation

.....88157

Xenon large-area tube

with additional protective grid.

Size of window: 166 cm², for beta and gamma radiation

.....88151

Tritium tube

Size of window: 7.1 cm²

.....88152

Butane gas mixture

100 ml ampoule

(5 pcs. are required)

.....88150

Test radiation emitter

AM 241/Sr90/1850 Bq*

.....88153

Spare foil frame

Set of 5 pcs.

.....98961

Wooden case

DIN 14880-2 H, for transport and protection of the above devices.

Dim. (LxWxH): 350x400x220 mm

Weight: 8 kg

.....88149

Dose alarm device FH 41 FM

for measuring of gamma radiation and X-rays during personal dose control.

The apparatus is carried on the body and determines the dose to which the carrier is exposed. When a preset dose value is reached, an alarm signal is triggered. A dose rate alarm threshold gives a warning if the max. determinable dose rate is exceeded. The display informs the carrier of the time limit for his stay in the critical area.

Approval for the fire services:

DW/FW/GSF 059008/1.

Technical data:

Dose alarm thresholds:

5, 15, 100, 250 mSv

Dose rate alarm threshold:

10 Sv/h

Power supply:

9 V battery IEC 6 LR 61.

Dim. (LxWxH): 120x50x25 mm

Weight: 0.15 kg

.....88220



Radiameter FH 40 F

Portable device for analogous and digital measuring value indication, for measuring of the local dose rate of gamma radiation.

When using an external probe the device automatically switches over to the right measuring and indication range. Three buttons are sufficient for measuring, checking and adjusting. When one of the preset alarm thresholds is reached, an alarm is triggered. In addition to the value indicator a loudspeaker can be connected for the acoustic reproduction of the impulses. If the indication range is exceeded or in case of low battery capacity, a corresponding message appears on the display. Housing of impact-resistant synthetic material. Microprocessor controlled electronic system.

Radiameter FH 40 F 1

Approval for the fire services:

DL/FW/GSF 128306/1

Energy range: 40 keV - 3 MeV

PTB measuring range:

200 µSv/h - 0.99 Sv/h

Indication range: 3 µSv/h - 999 mSv/h

PTB approval: 23.01/84.06

Power supply:

9 V battery IEC LF 22

Protection class: IP 65.

Dim. (LxWxH): 160x85x40 mm

Weight: 0.5 kg

.....88190



RADIATION DOSE RATE MEASURING SYSTEMS AND ACCESSORIES

Radiameter FH 40 F 2*

Approval for the fire services:
DL/FW/GSF 058809/1.
The approval for the fire services is
only valid together with the high-dose
external probe FHZ 130 A
(not included in the scope of supply).
Energy range: 45 keV - 1.3 MeV
PTB measuring range:
0.50 μ Sv/h - 9.9 mSv/h
Indication range:
0.01 μ Sv/h - 9.99 mSv/h
PTB approval: 23.01/84.09
Power supply:
9 V battery IEC LF 22
Protection class: IP 65.
Dim. (LxWxH): 160x85x40 mm
Weight: 0.5 kg

.....88221

High-dose gamma probe FHZ 130 A

for radiameter FH 40 F 2,
art.no. 88221.
Measuring range:
100 μ Sv/h - 9.99 Sv/h,
Test radiation emitter FH 35 D,
Cs-137/333 kBq, incl. storage box, for
function control of the radiameters
FH 40 F 1/FH 40 F 2/FH 40 G and
FH 40 G-L as well as extension of the
validity of the calibration of the
FH 40 F 2.
(illustrated on page 25)

.....88222

Test radiation emitter FH 35 D*

Cs-137/333 kBq

.....88223

Bracket for FH 35 D

Required for function test of the radia-
meter with the test radiation emitter
FH 35 D

.....88224

Probe cable

for connection of an external probe.
Length: 1.25 m.
(illustrated on page 25)

.....88225

Tele probe FH 40 FE*

for measuring the gamma dose rate in
places difficult to reach.
Approval for the fire services:
DL/FW/GSF 059013.
The following instrument is required:
Radiameter FH 40 F 1 or FH 40 F 2.
Indication range:
0.01 μ Sv/h - 9.99 Sv/h.
Telescope length: 3.26 m
Weight: 2.1 kg (without radiameter)

.....88226

Radiameter FH 40 G*

Advanced version of the FH 40 F
series. A single proportional tube is
sufficient as a detector for the total
measuring range. The microprocessor
continuously controls the proportional
tube and thus the indicated measuring
values are subject to constant quality
assurance. With connections for PC
and external probes.
Approval for the fire services:
DL/FW/IdF 029819
Energy range: 36 keV - 1.3 MeV
PTB measuring range:
0.1 μ Sv/h - 0.99 Sv/h
Indication range: 0.01 μ Sv/h - 1 Sv/h
PTB approval: 23.03/95.26
Power supply:
2 round cells 1.5 V IEC R 6
Protection class: IP 67
(watertight down to a depth of 1 m).
Dim. (LxWxH): 195x73x42 mm
Weight: 0.4 kg

.....88228



Radiameter FH 40 G-L

As art.no. 88228 above, but:
Energy range: 36 keV - 1.3 MeV
PTB measuring range:
0.1 μ Sv/h - 25 mSv/h
PTB approval: 23.01/96.06

.....88229

Tele probe FH 40 FE-G

also for measuring of beta-contamina-
tions.

The following instrument is required:
Radiameter FH 40 G or FH 40 G-L.
Measuring range: 10 nSv/h - 10 Sv/h
Telescope length: 3.6 m

.....88232

Storage case

Aluminium/plastics, for tele probe
FH 40 FE-G or FH 40 FE for one
radiameter and one tele probe.
Dim. (LxWxH): 900x160x140 mm
Weight: 1 kg

.....88227



NBR probe FHZ 672-E

for highly sensitive gamma
measurements, for sensitive detection of
artificial radiation sources in changing
natural radiation fields. Aluminium
housing with handles and bracket for
FH 40-G.

.....88233

Spiral cable

0.3 ... 1.2 m for external probe of
FH 40-G

.....88234

Storage case

for FHZ 672-E, hard-top case for one
radiameter FH 40-G as well as the
NBR probe FHZ 672-E.
Dim. (LxWxH): 470x390x190 mm
Weight: 1 kg

.....88235

Roll of adhesive tape*

Yellow background, with black edge,
black radiation base sign and the word
"Radioaktiv" in black.

Dim. (LxW): 66x0.015 m

.....99220

Roll of cordon-off tape with the word "RADIOAKTIV"

Dim. (LxW): 500x0.08 m

.....99221

88195



Long pliers

with mobile claws for gripping of radiated items.

Length: 1250 mm

Weight: 0.6 kg

.....88195

61326



Foil welder POLYSTAR 100 GE

Impulse transmitter with adjustable, electronic welding timing relays. ON/OFF switch with pilot lamp for function control. For welding of e.g. foils up to 2 x 0.3 mm. For connection to the impulse welding pliers POLYSTAR 40 C with a seam length of 400 mm.

Provided with a diode in the pliers' head for controlling the welding procedure. With 3 m of connecting cable.

Dim. (LxWxH):

Polystar 100 GE: 355x190x115 mm

Welding pliers Polystar 40 D:

410x220x65 mm

Weight: 8.1 kg (complete)

.....61326

PE welding foils on request.

88178



ISOTEMP contamination protective suit KONTAC 200/A

Approval for the fire services:

KSA/FW/GSF 028809.

Consisting of: Protective suit with close-fitting hood with face seal, with braided zippers in the sleeves and legs and covered zipper at the back.

Material: NOMEX III, permanently anti-static and flame retarding, resistant to oil and water. White.

Use: Protects the BA-wearer against dusty and liquid radioactive isotopes.

Breathing protection: The face seal fits with all full face masks, EN 136. The breathing apparatus is worn over the suit.

One size for all.

Space required (WxHxD):

280x340x70 mm

Weight: 1.1 kg

.....88178

88183



ISOTEMP contamination protective suit KONTAC 200/A/PA

Approval for the fire services:

KSA/FW/IdF 049411.

Consisting of: Protective suit (one-part with fixed hood for all types of helmets) with 2 sleeve and leg zippers.

1 zipper in the back with bulge for the compressed air breathing apparatus.

Material and use:

As art.no. 88178 above.

Breathing protection:

The compressed air breathing apparatus is worn under the suit.

Size: Standard size up to body size 185 cm (oversize on request).

Space required (WxHxD):

250x450x210 mm

Weight: 1.9 kg

.....88183

88179



ISOTEMP contamination protective hood KONTAC 200/H

Approval for the fire services:

KSA/FW/GSF 028810.

Hood with face seal, with long chest and shoulder protection.

One size for all.

Space required (WxHxD):

180x180x30 mm

Weight: 0.1 kg

.....88179

Packing bag*

for KONTAC 200/A and 200/A/PA

.....88185



CONTAMINATION PROTECTIVE CLOTHING MINERAL OIL PROTECTIVE CLOTHING



ISOTEMP contamination protective hood KONTAC 200/H/PA

Approval for the fire services:

KSA/FW/IdF 049412.

Featuring: Total protection of head, helmet and mask; with wide front protection; with velcro waist fastener.

Fits with all types of helmets.

Net visual field: 110x270 mm.

One size for all.

Space required (WxHxD):

300x300x150 mm

Weight: 0.6 kg

.....88184

Contamination protective gloves*

EN 374, PVC-coated, green, with gauntlet, size N = 9 1/2 - 11.

Length: 60 cm

Weight: 0.4 kg (pair)

.....88167

Special mineral oil protective suit "ISOPANT"

Coated cotton fabric with flame retardant, poretight and mineral oil resistant special plastic coating. Protective effect because

1. due to the tightness of the pores no inflammable liquid can come in contact with the skin
2. if the liquid should ignite, the flames and heat make the material swell and incrust. In this way the material takes up the effect of flames and heat and prevents the otherwise non-avoidable perilous burns.

Features:

- Permanently heavily inflammable, DIN 53906
- Permanently watertight DIN 53886
- Absolutely airtight
- Largely resistant to acids and alkalis, DIN 32762
- Surface resistance at 5×10^8 ohm

These special protective suits are designed for self-protection of persons in contact with easily inflammable liquids but not for active fire fighting. Due to the required tightness of the pores the material is not breathing. Vent openings, however, are provided in suitable places.

Special protective suit*

2-part, orange, (optional black/blue). Jacket without pockets with fold-down collar and covered zipper. Sleeves with elastics and vent holes in the arm-pit area.

Dungarees with adjustable waistband without side pockets. Pocket in chest flap. Elastic and adjustable braces.

Bottom of legs with elastics.

Weight: 2.4 kg

Size 48 - 54

.....57313

Oversize 56 - 60

.....57310

Protective hood with short waistcoat*

Material as art.no. 57313.

The hood is worn over the helmet, with exchangeable flame protective sieve 200x250 mm and polyglass window.

Short waistcoat with 3 press button in front and 2 buckles at the side.

Orange.

Weight: 1.3 kg

.....57314

5-finger gloves, dark blue*

Material as art.no. 57313, lined, for hooking on to the short waistcoat of the protective hood.

Length: 36 cm

Weight: 270 g

.....92781

Packing bag*

for a 2-part "ISOPANT" suit, one protective hood and one pair of 5-finger gloves

.....63899

LEAK SEALING BAGS AND ACCESSORIES



VETTER leak sealing bags
working pressure max. 1.5 bar
for sealing of pipes, tanks, drums, road tank trucks or rail tank wagons with diameters from 48 cm onwards.
Material: Polyamide fabric reinforced top plate, self-extinguishing, anti-static, resistant to oil and ozone, good resistance to chemicals.

Leak sealing bag LD 50/30 W*
with swivel eyes. The highly mobile fasteners allow the bags to be spread and tensioned at all angles.
Sealing surface: 500x300 mm
Content: 7 l.
Dim. (LxWxH): 690x310x20 mm
Weight: 6.9 kg

.....**63686**



Leak sealing bag LD 50/30 S
with belt guiding slits, no sparking swivel eyes, no metal fittings. The ratchet belts press the bag down on the leak.
Sealing surface: 500x300 mm
Content: 7 l.
Dim. (LxWxH): 615x300x20 mm
Weight: 4.2 kg

.....**64390**

VETTER leak drainage bags
working pressure max. 1.5 bar
for simultaneous leak plugging and liquid drainage.

Leak draining bag DLD 50/30
with stainless steel coupling size Storz D.
Sealing surface: 500x300 mm
Drain compartment: 400x200x35 mm
Content: 2.5 l.
Dim. (LxW): 620x300 mm
Weight: 7.6 kg

.....**64396**



Accessories for leak sealing bags and leak drainage bags

Set of tensioning belts for LD 50/30 W*
Material: Polyester, 50 mm wide, tensile strength 4000 kg.

Consisting of
1 ratchet belt, 2 m, orange
1 ratchet belt, 2 m, blue
1 fastening belt, 5 m, orange
1 fastening belt, 5 m, blue

.....**63680**

Set of tensioning and extension belts for LD 50/30 W, LD 50/30 S and DLD 50/30*

Material: Polyester, 50 mm wide, tensile strength 4000 kg.
Consisting of
1 tensioning and extension belt, 10 m, orange, with ratchet;
1 tensioning and extension belt, 10 m, blue, with ratchet

.....**63683**



Sealing plate for LD 50/30 W and LD 50/30 S

Dim. (LxWxH): 1000x300x30 mm

.....**93110**

Set of sealing plates for LD 50/30 W and LD 50/30 S

Consisting of
2 sealing plates resistant to heating oil.
Dim. (LxWxH):
600x300x30 mm (a plate)

.....**63682**

Acid protective cover for LD 50/30 W*

PVC, yellow, for protecting the bag from aggressive agents

.....**63681**

Acid protective cover for LD 50/30 S

.....**64392**



Stainless steel ball valve Storz D*
for leak drainage bag DLD 50/30 and vacuum leak drainage bag DLD 50 VAC

.....**42251**

* = not illustrated



LEAK SEALING BANDAGES PIPE/GULLY SEALING BAGS AND ACCESSORIES



VETTER leak sealing bandages working pressure max. 1.5 bar for sealing leaks on pipes and round containers in the diameter range from 50 to 480 mm. For staunching long tears in the side of a tank.

Leak sealing bandage LB 5 - 20
Sealing surface: 190 mm wide
Nominal content: 8 l
Dim. (LxW): 980x210 mm
Weight: 2.3 kg
.....63332

Leak sealing bandage LB 20 - 48
Sealing surface: 190 mm wide
Nominal content: 16 l
Dim. (LxW): 1770x210 mm
Weight: 3.6 kg
.....63333

Inflation hose 10 m, blue
Complete with quick-action couplings.
Weight: 1.4 kg
.....63685

Controllers for use with leak sealing bags, leak drainage bags, leak sealing bandages and pipe sealing bags when compressed air cylinders are used.

Single fitting controller 1.5 bar for inflation of one bag or bandage. With safety valve, manometer and shut-off.
Weight: 1.5 kg
.....63684



Dual fitting safety controller 1.5 bar for simultaneous inflation of 2 bags or bandages. With 2 safety valves, 2 manometers and 2 shut-offs.
Weight: 2.6 kg
.....63590

Inflation and safety hose 1.5 bar, 10 m, blue* with safety valve 1.5 bar, tyre valve, deflation valve and nipple.
Weight: 1.8 kg
.....63593

Pressure reducer 200/300 bar* with 2 m of connection hose and nipple, 2 manometers and safety valve.
Weight: 1.5 kg
.....63297

Compressed air cylinder 4 l/200 bar*
Ø 115 mm,
Length with valve: 585 mm.
Weight: 6.1 kg (filled)
.....58861

Compressed air cylinder 6 l/300 bar (steel)*
Ø 140 mm,
Length with valve: 605 mm.
Weight: 11.5 kg (filled)
.....58769

Compressed air cylinder 10 l/200 bar*
Ø 170 mm,
Length with valve: 675 mm.
Weight: 13.6 kg (filled)
.....58864



VETTER pipe sealing bags working pressure max. 1.5 bar for sealing gullies and sewer pipes after haz-mat accidents to prevent groundwater pollution. Material: Robust rubber material, resistant to most chemicals.

Pipe sealing bag RDK 7/15* for pipes of 70 - 150 mm
Cylinder length: 300 mm
Total length: 350 mm
Diameter: 68 mm
Weight: 0.5 kg
.....64400

Pipe sealing bag RDK 10/20 for pipes of 100 - 200 mm
Cylinder length: 510 mm
Total length: 570 mm
Diameter: 90 mm
Weight: 1.2 kg
.....63586

Pipe sealing bag RDK 20/40 for pipes of 200 - 400 mm
Cylinder length: 510 mm
Total length: 570 mm
Diameter: 195 mm
Weight: 3.1 kg
.....63587

Pipe sealing bag RDK 30/60 for pipes of 300 - 600 mm
Cylinder length: 735 mm
Total length: 780 mm
Diameter: 295 mm
Weight: 7 kg
.....63588

Pipe sealing bag RDK 50/80* with PE core, for pipes of 500-800 mm
Cylinder length: 566 mm
Total length: 620 mm
Diameter: 450 mm
Weight: 27 kg
.....64401

* = not illustrated

Some articles may not be available in specific countries. Details on request.

PIPE/GULLY SEALING BAGS VACUUM LEAK DRAINAGE BAGS AND ACCESSORIES



Pipe sealing bag RDK 50/100

for pipes of 500 - 1000 mm
Cylinder length: 1110 mm
Total length: 1170 mm
Diameter: 450 mm
Weight: 17 kg
(illustrated on page 30)

.....64394

Pipe sealing bag RDK 50/120*

with PE core,
for pipes of 500 - 1200 mm
Cylinder length: 900 mm
Total length: 940 mm
Diameter: 450 mm
Weight: 41 kg

.....64395

Pipe sealing bag RDK 60/120*

for pipes of 590 - 1200 mm
Cylinder length: 1300 mm
Total length: 1360 mm
Diameter: 580 mm
Weight: 25 kg

.....64402

Dual connector 200 bar*

for simultaneous draining of 2 compressed air cylinders of 200 bar.
Weight: 0.8 kg

.....63274

Dual connector 300 bar*

for simultaneous draining of 2 compressed air cylinders of 300 bar.
Weight: 0.8 kg

.....63336

Set of adapters*

for connecting the various compressed air sources to the controller, consisting of truck compressed air connection, blind coupling, truck tyre inflator adapter, truck tyre valve, truck tyre valve connection, compressed air mains, adapter pouch, green air supply hose of 10 m, green air supply hose of 10 m with ball valve.
Weight: 5 kg

.....63575

Hand pump*

520 cm³/stroke, incl. 2 m of air hose, with nipple

.....63298

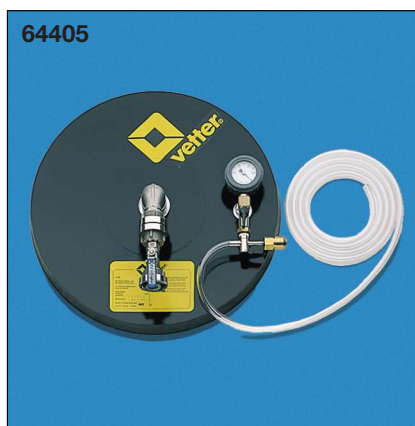
Foot pump*

420 cm³/stroke, incl. 2 m of air hose, with nipple

.....63299

VETTER vacuum leak drainage bags with accessories

for leak sealing without belts, on clean, smooth and slightly curved surfaces. For use on tank trucks or rail tank wagons, large containers and storage tanks.



Vacuum leak drainage bag DLD 50 VAC

(Round), incl. vacuum connection with vacuum nozzle, transparent venting and draining hose of 5 m and Ø 9 mm, shut off unit, manometer, stainless steel connection V4A, size Storz D. Ø 500 mm
Weight: 5.2 kg

.....64405

Stainless steel ball valve Storz D*

Please see page 29, art.no. 42251

Air supply hose of 10 m*

Green, with shut-off valve

.....64406

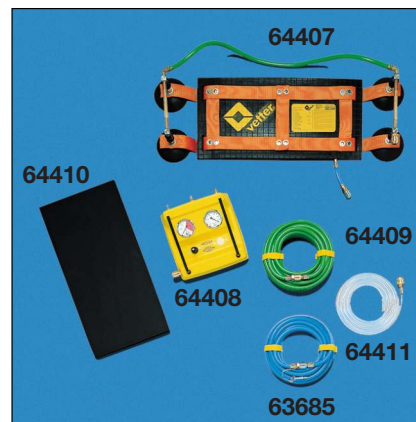
Pressure reducer 200/300 bar*

Please see page 30, art.no. 63297

Compressed air cylinder

6 l/300 bar*

Please see page 30, art.no. 58769



Vacuum leak drainage bag LD 50/30 VAC

Larger sealing surface: 500x300 mm
Dim. (LxWxH): 950x320x160 mm
Weight: 7 kg

.....64407

Controller 1.5 bar, with deadman lever

for LD 50/30 VAC

.....64408

Air supply hose of 10 m, green

Complete with quick-action couplings.
Weight: 1.4 kg

.....64409

Inflation hose 10 m, blue

Please see page 30, art.no. 63685

Sealing plate

Resistant to heating oil.
Dim. (LxWxH): 600x300x30 mm

.....64410

Venting and draining hose 5 m

Transparent

.....64411



MINI LEAK SEALING BAGS **GULLY SEALING BAGS, SEALING LANCE** **PIPE SEALING SLEEVES**



VETTER sealing sets

VETTER set of mini leak sealing bags 1.5 bar

for plugging of leaks on small drums, pipes, iron-hooped barrels and containers of diameter from 100 to 900 mm.

Consisting of:

LDK 10/10

(sealing surface 95x95 mm),

LDK 10/25

(sealing surface 95x255 mm),

LDK 20/20

(sealing surface 195x195 mm).

Foot pump with safety valve,

2 tensioning belts 150 cm long, blue, with velcro strip fastener,

3 tensioning belts 300 cm long, blue, with velcro strip fastener,

1 yellow portable case.

Dim. (LxWxH): 600x400x135 mm

Weight: 8.6 kg

.....64389

VETTER set of compact gully sealing bags with compressed air inflation device*

for emergency sealing of gullies and manholes ranging from 300 to 500 mm in diameter, with a maximum pondage height of 0.5 mWH, where no back-pressure or underpressure is expected in the sewer network.

Consisting of:

Compact gully sealing bag with 2 m of inflation hose and 2 m of tethering line. Working pressure 0.3 bar. Inflation and safety device with finger-tight connector, pressure reducer, safety valve 0.3 bar, manometer, quick-action coupling, compressed air cylinder 1 l/200 bar, EN 849, yellow portable case.

Dim. (LxWxH): 600x400x135 mm

Weight: 9.7 kg

.....58640



VETTER set of universal gully-sealing bags 2.5 bar

for quick sealing of all road gullies with outlets of 100 to 150 mm, to keep out pollutants after accidents with hazardous goods.

Consisting of:

4 universal gully sealing bags 2.5 bar, type 10/15 with 2.5 m inflation hose and 2.5 m tethering line,

foot pump with safety valve and manometer,

exchangeable positioning rod 1.5 m,

yellow portable case.

Dim. (LxWxH): 600x400x185 mm

Weight: 12.1 kg

.....63589



VETTER set of leak sealing lances 1.5 bar

for fast sealing of leaks by a single person on tank trucks, rail tank wagons and storage tanks. No tensioning belts are required.

Consisting of:

1 wedge-type bag 6 (230x60x50 mm)

1 wedge-type bag 8 (230x80x55 mm)

1 wedge type bag 11 (230x110x70 mm)

1 cone-type bag 7 (230x70 mm Ø)

3 lances at 350 mm

1 PVC hollow rod with chain and nipple

1 shut-off unit

1 drip protection

1 foot pump with safety valve, 1.5 bar, with manometer

1 yellow portable case.

Dim. (WxHxD): 400x300x183 mm

Weight: 6.5 kg

.....63386

VETTER set of pipe sealing sleeves*

for mechanical sealing of pipelines operating at up to 16 bar.

Material: Malleable iron with perbunan sealings, consisting of:

7 sealing sleeves 1/2 bis 2 1/2"

1 stud driver for socket head screws

1 wrench for socket head screws

1 portable case.

Dim. (LxWxH): 400x300x183 mm

Weight: 13.1 kg

.....63385

Pipe sealing sleeve 3"*

Weight: 3.85 kg

.....63340

Pipe sealing sleeve 4"*

Weight: 5.7 kg

.....63341

* = not illustrated



Pit covering

(Adjustable shape) tearproof PVC bag, conically shaped, resistant to mineral oils, with plastic pull cord at the top. The covering is placed over the gully inlet and quickly filled with water. Base dimensions: 750x750 mm Height: 550 mm Weight: 1.2 kg

.....56962

Pit covering*

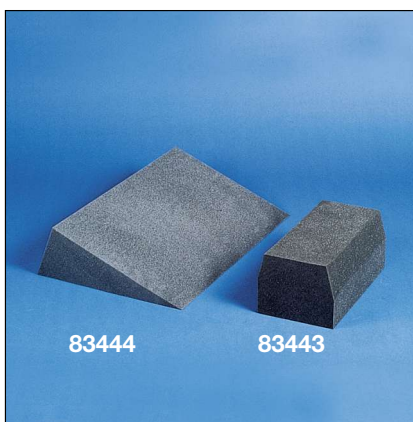
Perbunan, resistant to oil and acids. Base dimensions: 750x750 mm Height: 400 mm Weight: 2 kg

.....56961

Sponge rubber sealing plate

for use with pit coverings, art.nos. 56962 and 56961. Dim. (LxWxH): 900x900x20 mm Weight: 0.3 kg

.....56963



Quick-action sealing wedge

for lateral gully inlets, made of cellular plastics, waterproof and impermeable to air. Conical sponge rubber sealing wedge resistant to mineral oils. Dim. (LxWxH): 450x200x250 mm Weight: 0.4 kg

.....83443

Quick-action sealing wedge

for lateral gully inlets, made of cellular plastics, waterproof and impermeable to air. Conical sponge rubber sealing wedge resistant to mineral oils. Dim. (LxWxH): 800x500x200 mm Weight: 0.4 kg

.....83444

Tensioning and extension belt*

Orange, with ratchet, tensile strength 4000 kg. Dim. (LxW): 10 m x 50 mm Weight: 2.6 kg

.....63920



Set of tank sealing wedges

DIN 14555, 20 pcs., soft wood. 5 pcs. each of size 200, 150, 100 and 50 mm. In a bag. Dim. (LxW): 300x70 mm Weight: 11.6 kg

.....61987

Set of tank sealing plugs

DIN 14555, 20 pcs., soft wood. Of different diameters. 5 pcs. of Ø 90/25 mm, 5 pcs. of Ø 60/10 mm, 10 pcs. of Ø 30/10 mm. In a bag. Length: 300 mm Weight: 3.5 kg

.....61986

Set of sealing plugs*

PP, conical, 10 pcs., length of plugs 150 mm, consisting of 6 pcs. Ø 50/10 mm, 4 pcs. Ø 25/5 mm

.....65091

Sealing bandage*

Plastic petrolatum bandage. Dim. (LxW): 10 m x 100 mm Weight: 1.2 kg

.....98942

Plate*

Stainless steel, 0.5 mm strong. Dim. (LxW): 1000x500 mm Weight: 2 kg

.....65093

Plate*

Soft PVC, 5 mm strong. Dim. (LxW): 1000x500 mm Weight: 3 kg

.....65094



SEALING EQUIPMENT GROUNDING MATERIAL

Rubber strips*

Resistant to mineral oils, 3.5 mm strong.

Dim. (LxW): 1000x300 mm

Weight: 1.3 kg

.....65092

Sealing hemp 1 kg*

Packed in PVC tool bag, art.no. 106084

.....32621

Lead wool*

Packed in PVC tool bag, art.no. 106084

.....87611

Rolled lead*

1 mm strong.

Weight: 3 kg

.....98730

Sand bag with pull cord*

Empty, for approx. 15 kg.

Dim (LxW): 600x300 mm

Material: Jute

Weight: 0.1 kg

.....61961

Material: Synthetic fibres

Weight: 0.08 kg

.....61962

Seditit leak sealing compound

A non-poisonous, granulated material. When mixed with water and kneaded an impervious mash is formed that controls combustible and other hazardous liquids. This compound can be used for sealing of leaks up to a hydrostatic pressure of approx. 4 m, e.g. also for reducing and draining off liquids leaking through dams. The material is composed of a polymer with high water absorption and a betonit groundmass. Due to its micro-structure the polymer absorbs water up to 300 times its own weight, thus achieving a sealing effect and preventing further penetration of mineral oils, acids and chemicals. Safe and easy application.



As a paste for leaks

Adheres even to greasy and rusty tanks. In tin.

Weight: 440 g

.....63390

As a paste for leaks

Resistant to acids. In tin.

Weight: 430 g

.....63391

As a granulated material*

In plastic bucket.

Weight: 21.5 kg

.....63389

Quick binding cement*

5 kg bucket

.....65063

Special connection screw clamp*

Brass. For grounding at hydrants, roof gutters etc. Opening up to 110 mm, with screw for connection of the grounding strands.

Weight: 1 kg

.....61955

Grounding strand 16 mm²

Copper strand, on both ends with hook-shaped open cable shoe for connection to the special connection screw clamp, art.no. 61955, as well as to other grounding connections

50 m long, plastic jacketed

Weight: 9.5 kg

.....82147

2.5 m long, plastic jacketed*

Weight: 0.5 kg

.....82151

10 m long, plastic jacketed*

Weight: 1.9 kg

.....82152



Drum for 50 m of grounding strand

All plastic, with brake.

Dim. (WxHxD): 264x365x200 mm

Weight: 1.6 kg (empty)

.....82125

Grounding pin

with T-handle and 3 grounding bolts with captive wing nuts M 8, galvanized.

Length: 550 mm

Weight: 1 kg

.....82144

Adhesive magnet for grounding

with wing nut M 8 for connection of a grounding strand.

Dim. (ØxH): 80x20 mm

Weight: 0.8 kg

.....53485



Non-sparking tools

Multi-purpose shovel, tub-shaped

Compregnated laminated wood. With handle and Y-grip.
Dim. (LxW): 1200x370 mm
Weight: 2 kg
.....61892

Shovel

Similar to DIN 20123, made of non-sparking alloy. Handle with Y-grip.
Dim. of blade (WxL): 250x300 mm
Total length: 1000 mm
Weight: 2.5 kg
.....61888

Pickaxe

Similar to DIN 20109, copper-beryllium, with stick

1.5 kg*

Dim. (LxW): 800x400 mm
Weight: 1.8 kg
.....61873

3 kg

Dim. (LxW): 950x550 mm
Weight: 3.8 kg
.....61875

Spade

Similar to DIN 20127, made of non-sparking alloy, handle with T-grip.
Dim. of blade (WxL): 185x280 mm
Total length: 1160 mm
Weight: 2.6 kg
.....61857



"Stomax" water wiper

SILUMIN casting, with perbunan strip, resistant to mineral oils, PVC-coated aluminium handle.
Dim. with stick (LxW): 1500x600 mm
Weight: 1.4 kg
.....56861

Piassava broom

Broom wood 340x75 mm, with handle, handle hole Ø 27 mm, bristle length 135 mm, wooden handle 1400x28 mm.
Weight: 0.8 kg
.....98916



Rubber hammer

Dim. with handle (WxH): 65x115 mm
Weight: 0.5 kg
.....61141

Wooden hammer B

with metal jacket.
Dim. (LxWxH): 360x160x80 mm
Weight: 0.8 kg
.....61162

Flat chisel

Non-sparking, copper-beryllium.
Dim. (LxW): 310x22 mm
Weight: 0.8 kg
.....61652

Hand protecting attachment

Plastic, for chisels of Ø 16-20 mm.
Weight: 0.3 kg
.....61653

Water pump pliers

Similar to DIN 5231, non-sparking, copper-beryllium.
Opening 50 mm.
Length: 300 mm
Weight: 0.6 kg
.....61352

Elbow pliers 2"

Opening up to 55 mm, made of non-sparking material.
Length: 560 mm
Weight: 2.4 kg
.....61763

Pipe spanner*

Adjustable, non-sparking, made of copper-beryllium, for pipe diameters of 6 up to 65 mm.
Length: 620 mm
Weight: 4 kg
.....61825

Copper hammer

1000 g, non-sparking, sledge-shaped, with handle.
Weight: 1.1 kg
.....61151

Fitter's hammer*

500 g, similar to DIN 1041, non-sparking, made of copper-beryllium.
Weight: 0.65 kg
.....61114

Screw driver*

Non-sparking, width of blade 4 mm.
Length: 165 mm
Weight: 0.03 kg
.....61451

Tool bag*

PVC
.....55112

Tool bag*

Leather.
Dim. (WxHxD): 430x170x260 mm
.....63918

* = not illustrated



OIL AND ACID BINDING AGENTS WITH ACCESSORIES

OIL AND CHEMICAL BINDING AGENTS



Universal spreader for oil and acid binding agents, type 221
2-wheel type, spreading width 45 cm.
Volume 20 l, with adjustable spreading rail
.....**61923**



Sieve and cleaning shovel
Buoyant, for removing of binding agents and for cleaning of all types of waters. With removable and adjustable 2-part aluminium handle of 2 m, frame of synthetic material, aluminium grid as a fine sieve.
Dim. (WxH): 280x360 mm
Weight: 1.75 kg
.....**61927**

"Öl-Ex" sieve rake
Aluminium, buoyant, for cleaning the water surface from oil binding agents and other floating items.
4-part handle of aluminium.
Total length: 3 m.
Dim. (LxWxH): 1000x220x80 mm
Weight: 2 kg
.....**62175**

Shovel for removing oil binding agents
Stainless steel, for removing floating oil binding agents

with 1-part handle, 2 m
Total length: 2.5 m
Weight: 4 kg
.....**61928**

with 2-part handle, 2 m*
Total length: 2.5 m,
length of the handle part with shovel:
1.5 m.
Weight: 4.5 kg
.....**61929**

Oil and chemical binding agents

"Öl-Ex" powder: type I and II "R"
The exceptionally efficient and low-priced oil and chemical binding agent, based on synthetic material, for water and soil - classified as type II and type II "R" -. This powder does not release already absorbed oil. Buoyant for days. Good pumping ability as the powder is non-abrasive.
Bulk weight: 49 g/l.
PE bags with 100 l.
Absorbing capacity up to 600% of its own weight.
Weight: 7 kg per bag
.....**62171**

"Öl-Ex 82" type I and II "R"
The heavy oil binding agent with higher bulk weight and coarse grains, low-dusting - classified as type I and II "R" - for use on large and small water surfaces as well as on land. Quality rating "R": Good non-skid ability on roads!
Bulk weight: 250 g/l.
PE bags with 70 l.
Weight: 16 kg per bag
.....**62160**

"Öl-Ex hard": type III "R"
The universal absorbing agent for all liquids on the ground, on roads, in workshops, in industrial plants etc. Easy to handle with a spreader. Quality rating "R": Good non-skid ability even when fully saturated, does not release absorbed agents even under heavy load.
High bulk weight: 1200 g/l.
Packed in rugged plastic valve bags.
Weight: 20 kg per bag
.....**62161**

TERRAPERL S, type III "R"
Universal absorbing agent, heavy, for cleaning of floors in industrial plants and for sprinkling on oil marks on roads. Not water-repellent, non-buoyant.
Bulk weight: 500 g/l.
Liquid absorption approx. 22 l per bag.
Packed in plastic bags.
Weight: 20 kg per bag
.....**62145**

TERRAPERL S "Spezial", type III "R"
Universal absorbing agent.
Bulk weight: 100 g/l.
Liquid absorption approx. 80 l per bag.

in 20 kg plastic bag.....62147
in 10 kg bag.....62148

Ekoperl 33 - standard quality, type II*
Mineral-based.
Bulk weight: 85 g/l.
Absorption up to approx. 300% of its own weight.
Weight: 9 kg per bag
.....**62141**

Ekoperl 66 - special quality, type I and II "R"
Mineral-based, particularly strong.
Bulk weight: 144 g/l.
Absorption up to approx. 250% of its own weight.
Weight: 14 kg per bag
.....**62142**

Special acid binding agent Ekoperl 99*
In 100 l plastic bag.
Weight: 28 kg per bag
.....**62143**



UNI-SAFE

The universal oil and chemical binding agent approved as **type III R** according to the rules for oil binding agents. An essential part is a polymer with enormous absorption capacity. The UNI-SAFE can absorb up to 75 times its own weight. Anhydrous media are absorbed physically due to the capillary effect, aqueous media are absorbed chemically-physically. UNI-SAFE takes over the weight of the liquid, thus forming an effective dam against further spreading of the pollutants. The green colour of UNI-SAFE acts as indicator. When in contact with acids the UNI-SAFE turns yellow and in case of contact with lye or alkaline substances it turns dark green to blue. **5 kg in bucket**

.....**62170**

Bag of chalk*

25 kg, in plastic bag

.....**62124**

"Öl-Ex" cube, type I and II SF, length of side 5 cm*

for petrol and oil separators, filter and cleaning units, large water surfaces, at high flow rates and strong water turbulences. Long-duration use, dust-free, easy to remove.

Weight: 10 kg per PE bag

.....**62162**

BioVersal FW*

The highly effective liquid compound for ecological removal of oil marks. Cleans intensively and activates the biological self-cleaning properties of nature. For use in accidents with e.g. mineral oils, Diesel, heating oil, petrol, kerosene, hydraulic oil as well as rape-seed oil. Encases mineral oil based products and converts them into a modification that is easily biologically decomposed, maintaining the floating ability. BioVersal reduces the potential risks typical at this kind of averages and activates a quick biological decomposition of the hazardous material at the site of the accident. BioVersal is pH neutral, is easily decomposed, in the concentration WGK 0, not poisonous, dermatologically harmless. The concentrate is diluted with water (BSG 9 or bucket pump approx. 0.4 l BioVersal FW/ 10 l water, high pressure application approx. 0.5 l BioVersal/100 l water) and used as required.

Approved by MPA NRW

no. 220320897.

Can, 25 l

.....**62165**



BioVersal BSG 9

Refillable spray unit (empty):

Volume: 9 l, mixture 25:1

Propellant: Nitrogen or compressed air

Working pressure:

max. 15 bar

Spraying time: approx. 5 - 6 min

Width of spray: max. 3 - 5 m

Sufficient for: max. 20 m² surface
max. 100 m oil marks

Temperature: at least +1°C

Dim. (WxHxD): 270x580x195 mm,
Ø 185 mm

Weight: 14.1 kg

.....**62166**

BioVersal package*

Consisting of: BioVersal in 25 l can, art.no. 62165 and BioVersal BSG 9, art.no. 62166

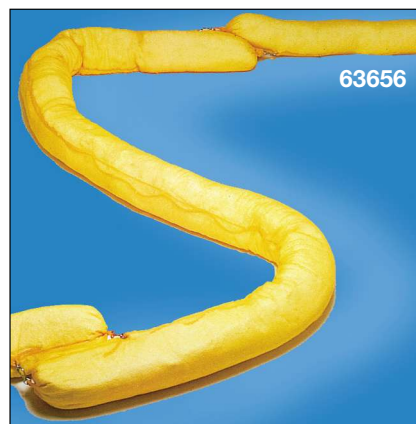
.....**62167**

Ekosorb "S" oil binding fleece

EKOSORB "S" is a fleece oil binding material made of polypropylene micro fibres with a binding capacity of up to 25 times its own weight. Effective oleophile properties with regard to hydrocarbons and derivatives such as petrol, Diesel, toluene, benzenes, methanols etc. Immediate and quick absorption through the micro fibres (blotting paper effect). Due to its oleophile and hydrophobic properties EKOSORB "S" is floating even in fully saturated condition. Disposal cost savings of up to 50%. Burning without causing toxic gases, minimum burning residues.

Certified by the German MPA and the French CEDRE.

Produced in compliance with the valid standard AFNOR NFT 90-360.



Ekosorb "S" hoses

for removal of oil spills in brooks, lakes, canals and harbour basins.

The hoses of 3 or 5 m length are connected by means of eyelets and carabines. An overlapping of approx. 30 cm guarantees the tightness of the barrier. The nettings are UV stabilized which increases the constancy of the product in operation.

Ekosorb "S" hose ES 810 B

Absorbing capacity: approx. 165 l.

Dim. (ØxL): 200 mm x 3 m

Weight: 4.25 kg

.....**63656**

* = not illustrated



OIL BINDING AGENTS OIL BARRIERS

Ekosorb "S" hose ES 816 B*

Absorbing capacity: approx. 270 l.
Dim. (ØxL): 200 mm x 5 m
Weight: 6.5 kg

.....63643

Ekosorb "S" hose ES 510*

Absorbing capacity: approx. 63 l.
Dim. (ØxL): 130 mm x 3 m
Weight: 2.5 kg

.....63657

Ekosorb "S" hose ES 516-2*

Absorbing capacity: approx. 100 l.
Dim. (ØxL): 30 mm x 5 m
Weight: 4 kg

.....63642

Ekosorb "S" double hose ES 5510*

Absorbing capacity: approx. 125 l.
Dim. (ØxL): 20 x 130 mm x 3 m
Weight: 5 kg

.....63658

Ekosorb "S" mats

are used on small surfaces or on surfaces that are difficult to reach. Two types with different weight per unit area are available, corresponding to the amount of polluted substances to be recovered.

Ekosorb "S" mats ES 200*

Packing unit at 200 pcs.
Weight per unit area: 200 g/m².
Absorbing capacity: approx. 240 l.
Dim. (LxW): 480x430 mm
Weight: 8.5 kg/unit

.....63659

Ekosorb "S" mats ES 100*

Packing unit at 100 pcs.
Weight per unit area: 375 g/m².
Absorbing capacity: approx. 240 l.
Dim. (LxW): 480x430 mm
Weight: 8 kg/unit

.....63645

Ekosorb "S" veil

To be used when small amounts of oil or oil films are to be removed from the water surface. The veil is fixed by means of a rope, by which it also can be pulled.

Ekosorb "S" veil SH 1900*

Absorbing capacity: approx. 195 l.
Dim. (LxW): 30 m x 480 mm
Weight: 6.5 kg

.....63644



Ekosorb "S" rolls

Can be used on the ground, on the shore or in water to protect and clean a large area. The rolled material can easily be cut to the required lengths.

Ekosorb "S" roll ES 250*

Weight per unit area: 200 g/m².
Absorbing capacity: approx. 469 l.
Dim. (LxW): 87 m x 960 mm
Weight: 17 kg

.....63663

Ekosorb "S" roll ES 250-2

Weight per unit area: 200 g/m².
Absorbing capacity: approx. 235 l.
Dim. (LxW): 87 m x 480 mm
Weight: 8.5 kg

.....63664

EKOSORB "S" roll ES 150*

Weight per unit area: 375 g/m².
Absorbing capacity: approx. 473 l.
Dim. (LxW): 44 m x 960 mm
Weight: 16 kg

.....63665

EKOSORB "S" roll ES 150-2*

Weight per unit area: 375 g/m².
Absorbing capacity: approx. 237 l.
Dim. (LxW): 44 m x 480 mm
Weight: 8 kg

.....63666

Oil barriers and accessories

Oil barrier 350 WDF "OPTIMAL"

is a flexible solid oil barrier, which can be coiled and stored on all common oil barrier reels. Buoyancy and inherent stability by means of robust plastic floats and flexible compensation pieces. The oil and waterproof outside skin consists of a plastic coated carrier fabric with high resistance to tear. Oil and water protected valves ensure optimum airtighting. Welded carrying handles facilitate the transport, make it easy to place the barrier on the water and make it possible to fix other devices (buoys, skimmers etc.) to the barrier. Due to the small immersion depth (120 mm) the barrier is particularly suitable for use on shallow and quick-flowing waters. A comprehensive system of accessories guarantees optimum efficiency in the most various of operations (adjustment pieces for shore and water level, various end pieces, adapters for other barrier systems etc.).

Material: Plastic coated polyester carrier fabric, 900 g/m²
Buoying medium: PS 15/PU Ø 200 mm
Ballast weights: Lead anodes, DIN 1719
Immersion depth: approx. 170 mm
Float: Ø 200x250 mm
Coupling system: Aluminium hinge coupling rail
Height: 350 mm
Weight: 5 kg/m

350 WDF, 5 m long* 62200

350 WDF, 10 m long 62201
(illustrated on page 39)



Accessories for oil barrier 350 WDF:

Hinge coupling rail*	62202
Shore fixing tail piece , single	62203
Shore fixing tail piece, double	62204
Shore fixing tail piece, single with mitre	62205
Shore fixing tail piece, double with mitre	62206
Shore protection 2-way piece	62207

250 WDF, 5 m long

.....62208

250 WDF, 10 m long

.....62209

Accessories for oil barrier 250 WDF:

Hinge coupling rail*	62210
Shore fixing tail piece, single*	62211
Shore fixing tail piece, double*	62212
Shore fixing tail piece, single* with mitre	62213
Shore fixing tail piece, double* with mitre	62214

Shore protection 2-way piece*

.....62215

Brook oil barrier "OPTIMAL"

As 350 WDF above with regard to material and construction, but:

Buoing medium: PS 15/PU
 Ø 150 mm,
 1000 mm long
 Immersion depth: approx. 100 mm
 Float: Ø 100x1000 mm
 Coupling system: Belt/clamp aluminium quick-coupling

Height: 200 mm
 Weight: 2.5 kg/m

5 m long.....62220

Accessories for brook oil barrier

Flat coupling rail*	62221
Shore fixing tail piece, single	62222
Shore fixing tail piece, double	62223
Shore fixing tail piece, single* with mitre	62224
Shore fixing tail piece, double* with mitre	62225
Shore protection 2-way piece	62226
Carrying bag* for 10 m brook oil barrier	62227

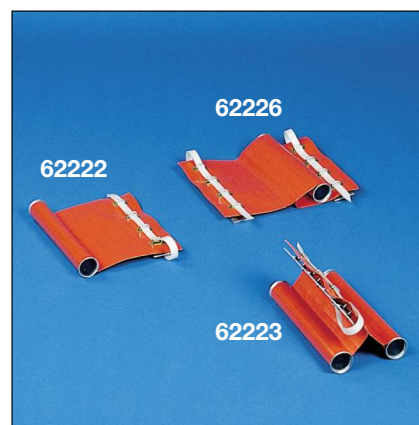
Carrying bag*

for 20 m brook oil barrier.....62228



Oil barrier 250 WDF "OPTIMAL"*

As 350 WDF above with regard to material and construction, but:
 Buoying medium: PS 15/PU Ø 150 mm
 Immersion depth: approx. 120 mm
 Float: Ø 150x250 mm
 Height: 250 mm
 Weight: 4 kg/m



* = not illustrated



EQUIPMENT FOR OIL BARRIERS

EMERGENCY CONTAINERS

OIL EQUIPMENT

Further equipment for use with oil barriers

Floating rope of PP*

(Set of 2 pcs.). On one end with spliced eye for shore fixing.
Dim. (ØxL): 14 mm x 15 m
Weight: 2 kg

.....62230

Floating rope of PP*

(Set of 2 pcs.). On one end with spliced eye for shore fixing.
Dim. (ØxL): 14 mm x 100 m
Weight: 14 kg

.....62231

Towing device*

for pulling and towing the oil barrier
WDF 350 and WDF 250 with one high-rigid shackle 1.5 t and 15 m of floating rope

.....62232

Oil barrier trailers with reels for 100 m or 200 m of oil barrier with accessories on request.

Mobile 50 m³ emergency container

Consisting of a corrosion resistant outside wall and an inside covering, PVC-coated on both sides (weight per unit area 900 g/m²) with accessories.

Scope of supply:

- 15 cover segments 1500x1500x4 mm
- 7 tensioning belts with bag
- 2 fill and drain pipes with adapters Storz A-B, B-C
- 1 ladder
- 1 inside covering with bag
- 1 repair set
- 1 loading container.

Dim. erected (ØxH): 7200x1750 mm

.....62235

Tarpaulin, resistant to chemicals*

TPE B III, for 50 m³ emergency container (weight per unit area 1300 g/m²)

.....62236

Tarpaulin, resistant to chemicals*

Tetrafluoroethylene, for 50 m³ emergency container (weight per unit area 1300 g/m²)

.....62237

Further containers of different sizes and materials on request.



Suction equipment, resistant to mineral oils

Suction pipe, size C

for suction from oil puddles. Plastic coated copper alloy pipe. With foot valve and adjustable pistol grip for valve control. With pipe elbow and size C coupling with suction sealing ring resistant to mineral oils.

Length: 1100 mm

Weight: 3.5 kg

.....46210

Suction hoses, resistant to mineral oils and electrically conductive

Black rubber hose, 5 mm strong. Covered inside spiral and copper strands in the hose wall connected to the brass couplings.

Size C suction hose, 52 mm i.d., 1.6 m long

On both ends with size C couplings of brass with grounding clamps.

Weight: 4.5 kg

.....31282

Size C suction hose, 38 mm i.d., 1.5 m long

On one end with size C brass coupling with grounding clamps, on the other end with a brass serrated suction piece. Suitable for suction out of mineral oil tanks with small openings. The suction piece allows an almost complete draining, as a flow from all sides is possible when it stands on the bottom of the tank.

Weight: 9.2 kg

.....31281

Size C suction hose, 38 mm i.d., 6 m long*

On both ends with size C brass couplings with grounding clamps. Particularly suitable for use with size C suction pipe, art.no. 46210.

Weight: 8.4 kg

.....31284

Size D suction hose, 25 mm i.d., 5 m long*

4.5 mm strong. On one end with size D brass coupling with 1 brass adapter C/D and 1 grounding clamp. One end without coupling. Suitable for suction out of heating oil tanks with small openings

.....31287



62235

MINERAL OIL ABSORPTION EQUIPMENT

FITTINGS RESISTANT TO MINERAL OILS



Shovel-shaped mineral oil aspirator

Aluminium, with double bottom, straight cutting edge in front, sloping sides with two bores for inserting the axis, bottom inlet with sieve and round thread for attaching the size C suction pipe, AWG, art.no. 46210.

A device for absorbing floating oil on standing or flowing waters. The suction shovel with attached suction pipe swims like a flat dish on the water. Sufficient buoyancy due to the double bottom. The bottom inlet is below the water surface. By lifting and lowering the suction pipe the shovel cutting edge separates a thick or thin layer of floating oil from the water surface. The oil runs along the inside front side of the shovel down to the bottom inlet. It is absorbed by the suction pipe and conveyed to the collecting container. When used on standing waters the shovel is lead over the oil covered surface. When used in flowing water the device can be fixed with 2 spits with adjustable bearing brackets. It is recommended to fix the unit in an angle between oil barrier and shore. Suction pipe, art.no. 46210, is required when using the shovel. Supplied with 2 adjustable bearing brackets.

Dim.: Cutting edge 100 cm wide, bottom inlet 30 cm, height up to the round thread 46.5 cm
Weight: 4.5 kg

.....46216

Suction strainer size C

DIN 14362, NW 40, with non-return valve, coupling with mineral oil resistant sealing, all brass.
Weight: 2.2 kg

.....42307

Spare bearing bracket

Adjustable, for pushing onto the spit, with clamping screw

.....46218

Spare sieve

for inserting in front of the bottom inlet of the suction shovel, aluminium perforated plate

.....46217

Spit for driving into the ground

Galvanized round steel.
Dim. (LxØ): 1120x12 mm
Weight: 1 kg

.....61251



Unika tank wagon drain coupling

Draining elbow of pressurized light metal alloy, clamping jaw, clamps and tommy screws of steel. For male thread of 80 to 140 mm. Adjustable by means of two spindles, thus suitable for all rail tank wagons, also with foreign thread. Brass reducing piece, brass size C coupling and mineral oil resistant suction sealing ring.
Weight: 7 kg

.....42907

Brass suction piece

serrated, for size C suction hose, 38 mm i.d.

.....32636



Sealing ring piece TW 1502

Brass, with mineral oil resistant sealing, with clamping ring and lever as well as size C brass coupling, with mineral oil resistant suction sealing ring. Suitable for road tank trucks up to 6000 l with standard couplings.
Weight: 1.3 kg

.....42913

Curved piece TW 1501

Brass, with mineral oil resistant sealing, with size C brass coupling, with mineral oil resistant suction sealing ring. Suitable for road tank trucks up to 6000 l with standard couplings.
Weight: 0.9 kg

.....42912

Elbow 90°

Brass, on both sides with size C coupling with mineral oil resistant sealing ring.
Weight: 1.7 kg

.....42271

Coupling wrench B/C

Please see page 6, art.no. 44915

Quick-action shut-off PN 16

Size C, opening NW 30, on both sides with coupling

Brass

Weight: 3.1 kg

.....42444

Light metal alloy*

Weight: 1.3 kg

.....42441

Universal barrel wrench

Please see page 6, art.no. 63919

* = not illustrated



MINERAL OIL HOSES/ARMATURES/PUMPS

MINERAL OIL RESISTANT DELIVERY EQUIPMENT

Curved piece TW 501*

Brass, with mineral oil resistant sealing, with brass reducing piece, with size C brass coupling, with mineral oil resistant suction sealing ring. Suitable for all road tank trucks over 6000 l with standard coupling. Weight: 1.5 kg

.....42909

Sealing ring piece TW 502*

Brass, with mineral oil resistant sealing, with clamping ring and lever as well as reducing piece and size C brass coupling, with mineral oil resistant suction sealing ring. Suitable for all road tank trucks over 6000 l with standard coupling. Weight: 2.7 kg

.....42911



Safety oil draining pipe, size C

for safe (laminar) draining of easily inflammable liquids through substantial elimination of the energy of flow. Plastic-jacketed pipe of copper alloy, at the top with elbow and size C coupling DIN 14307, at the bottom with sieve cylinder and convex screw-off plate. Smooth draining of liquids without vorticity. Length: 1070 mm

Weight: 3.5 kg

.....46211

Size C draining pipe with ball valve

Brass, consisting of ball valve NW 30 ND 16, completely of brass, with size C coupling with oil resistant pressure and sealing rings. Outlet 1 1/4" female thread, with screwed on cylinder rod

.....42801

31112



Mineral oil delivery hose Pipeline

Resistant to mineral oils and chemicals, electrically conductive. Made of branded polyester, endless woven, twill weave. Warp double twisted, filler yarn multi-twisted, with copper strands. With synthetic inside lining of Perbunan N, electrically conductive and black synthetic outside coating with high resistance to abrasion. On both ends with brass couplings with mineral oil resistant sealing ring and grounding clamp.

Size C, 52 mm i.d., 15 m long

.....31112

Size C, 42 mm i.d., 15 m long*

.....31111

The portable self-priming TUP is suitable for use with mineral oil products and other non-aggressive liquids with a viscosity of $<1.5 \text{ cm}^2/\text{sec}$. It is provided with an ex-proof motor 400 V/2.5 kW and can be used for flammable liquids of explosion group II and temperature class T1-T3 in zone 1 and 2 (explosion endangered areas). The rugged construction makes the pump safe to run dry, resistant to dirty water, lightweight and completely maintenance-free. Due to the excellent suction capacity the pump can be used for aspiration of water-air mixtures.

Pump

performance: 320 l/min at 1.5 bar and 1.5 m geod.

suction height
Plug: EEx de II CT6,
400 V, 16 A

Light socket: EEx de CT6,
230 V

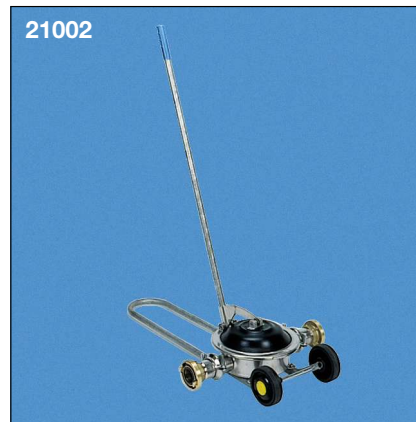
Carrying frame: Steel frame with
removable handles
with cold protection

Suction/delivery
connection: Size C Storz
coupling

Dim. (LxWxH): 620x390x460 mm

Weight: 52 kg

.....63848



21002

TUP 3-1.5

Mineral oil transfer pump TUP 3-1.5, DIN 14424, portable, with ex-protected three-phase motor. Light socket EEx de II CT6, 230 V, 16 A, 3 P, for connection of our ex-proof cable lamp, art.no. 58119.



63848

Mineral oil transfer pump, manually operated

Manual diaphragm pump made of stainless steel. The ideal pump for small oil accidents, light, compact and independent of any energy source. By means of a diaphragm thin and semi-liquid media, even with foreign particles, can be transferred without large energy consumption. With size C coupling on suction and delivery side.

* = not illustrated

MINERAL OIL TRANSFER PUMPS SKIMMERS OIL SEPARATORS



With removable pump lever.
With wheeled gear for easy transport.
Performance: 100 to 200 l/min
Performance per stroke: 4 l
Total delivery height: 6 m WS
Suction height: 5 m.
Dim. (LxWxH): 990x520x200 mm
Weight: 10.3 kg with wheeled gear
.....21002

Plastic can 5 l*
with pourer, for filling of the pump
housing of the mineral oil transfer
pumps.
Weight: 0.8 kg
.....56888



Oil skimmer OELA III
for absorption of mineral oils from
the water surface. Floating type with
4 floats, removable for transport, and
a lower placed collecting container
with size C suction connection.
Self-aspirating, e.g. the collecting
container cannot be completely
emptied and must not be submerged
before use.
With 10 m of floating hose Ø 2", on
both ends with size C coupling.
Performance: 100 - 400 l/min.
Dimensions:
- operational 975x975x410 mm
diagonal 1300 mm
- transport: 720x665x390 mm
diagonal 840 mm
Weight: 43 kg
.....63383

Special suction skimmer*
for absorption of mineral oils from
water surfaces with individually
trimmable floats. Suitable for small
water surfaces, wells, sewers as well
as calm large water surfaces.
The special suction skimmer is made
of GRP and the floats of polyurethane
foam. For absorbing the oil/water
mixture a 1 1/2" connection with DN
50 threaded connection is provided.
Performance: 100 - 300 l/min
Water depth: 240 mm
Dim. (LxWxH): 440x440x350 mm
Weight: 7.5 kg
.....63382

AQUAPROTECTOR type I
Patented universal light liquid separa-
tor "System H" for mobile short-time
use.
The AQUAPROTECTOR is approved
according to DIN 1999-3, by the LGA
Würzburg as stationary apparatus
(LGA certificate 185/86).
The AQUAPROTECTOR is supplied in
a transport container which in opera-
tion is used as a receptacle with
removable partition and removable
flow smoothing pack.
The AQUAPROTECTOR is used with
coalescence aid packs (polypropylene
filling material). It is fitted with a size
DN 50 cone-type connection as inlet
and each one size DN 50 thread
connection as outlet for oil and water.
The AQUAPROTECTOR and the
transport container are fitted with
adjustable feet as well as with a spirit
level for leveling purposes.

Material: Stainless steel 1.431 pickled.
Nominal performance:
Oil/water mixture 100 - 150 l/min,
corresponds to stage I of ELRO-pump,
DIN 14427.
Transport dimensions (LxWxH):
800x600x700 mm
Weight: 120 kg
.....65200

**Mobile oil separator
"AQUAPROTECTOR III"**
according to the patented system "H"
in modified version with continuous oil
delivery (double-acting oil delivery
bell), mounted on single axle trailer.

System
The mobile unit is a separator for
liquids of low viscosity with automatic
oil delivery and designed in compli-
ance with DIN 1999-1. The unit is
used for the recovery and separation
of mineral oil and similar media -
heavy polluted and harmful to the
environment - from the groundwater
surface or from standing and flowing
waters as well as from wells, where a
quick treatment is necessary to pre-
vent further damages. The complete
unit is mounted on a single axle
chassis equipped in compliance with
the German road regulations and
designed in compliance with DIN
14503. The trailer has a single axle
with torsion bar spring, and is provided
with a towing unit adjustable in height
and overrunning brake with automatic
backing system (power-assisted). The
rugged supporting wheel and the four
infinitely adjustable supporting struts
ensure a safe handling and good
stability even under rough conditions.



* = not illustrated



OIL SEPARATORS

WATER/MINERAL OIL COLLECTING CONTAINERS AND ACCESSORIES

Technical data - separator

Contents (when ready for use): 2300 l
Material: Stainless steel 1.4301
Inlet: R 3", male thread
Outlet: R 4", male thread
Oil outlet: R 2"
Draining: R 2"
Model: NG 15, DIN 1999
Dim. (LxWxH): 2700x900x1250 mm

Performance - efficiency:

Model: Corresponds to separator NG 15, DIN 1999, approv.no. PA II 3132 + 4062;
Efficiency: According to test certificate 253/86 NG 10 at 10 l/sec. = 1.7 mg/l, NG 20 at 20 l/sec. = 1.6 mg/l

Techn. data - single axle trailer:

Lights: Acc. to German road regulations 12 V, incl. reversing and fog lamp plug 13-pole
Tyres: 185 R 14 C
Permissible top speed: 80 km/h
G.V.W.: 1600 kg
Effective total weight: 1100 kg
Empty weight: 850 kg

Set of coalescence cassettes

Consisting of 2 sieve cassettes filled with heavy-duty filling material of model R 1".

Techn. data:

Material of cassette: Stainless steel 1.4301
Type of filling material: PP
Coalescence effective surface: 180 m²/m³
Free flow section: 92%
Dim. per cassette (LxWxH): 900x450x680 mm
.....65204



Water containers

PES fabric, PVC-coating on both sides, weight of fabric 600 g/m², warp tensile strength 280 kp, filling yarn 200 kp.
Seam at the top for inserting the bracing pipes.

Water container, 1600 l*

Dim. (bottom area x height): 1400x1400x800 mm
Weight: 7.5 kg
.....56924

Water container 3000 l*

Dim. (bottom area x height): 1800x1800x1050 mm
Weight: 8.5 kg
.....56925

Bracing of galvanized steel pipes

Consisting of 4 identical bracing pipes and 4 identical feet, at the top with welded pipe angle at the bottom with convex plate

for container, 1600 l

Weight: 11.5 kg
.....56971

for container, 3000 l

Weight: 20 kg
.....56972

Packing bag*

PVC-coated perlon fabric, for water and mineral oil collecting containers

for container, 1600 l

Weight: 0.3 kg
.....55242

for container, 3000 l

Weight: 0.7 kg
.....55210



Inlet elbow

Galvanized, with leather strap for fixing the hose line to the bracing frame

with size C coupling

Weight: 1.1 kg
.....56983

with size B coupling

Weight: 2.1 kg
.....56981

Foldable containers made of chemical fibre fabric

with perbunan N (nitrile rubber) coating on both sides, resistant to mineral oils of class A1 (except for pure benzene), A2 and A3. Continuous and full resistance/tightness without essential changes in the material for 100 hours due to the plated coat of perbunan N and the homogeneous connection of the webs by means of hot vulcanization. The resistance and tightness to pure benzene is 24 hours. Weight of fabric 1000 g/m², tensile strength of warp and filling yarn 3000 N.

3000 l folding container - open*

At the top with seam and reinforced corners for inserting the bracing frame. Incl. marked packing bag.
Bottom area: 2000x2000 mm
Height: 900 mm
Top opening: 1700x1700 mm
Weight: 15 kg
.....65099

3000 I foldable container - open*

As art.no. 65099, but on one side with flange with threaded connection DN 50 with blank cap with chain, incl. stainless steel screws and Viton sealings. With marked packing bag.

Weight: 16 kg
.....**65115**

Bracing frame*

Stainless steel for foldable containers art.nos. 65099 and 65115

.....**65100**



3000 I foldable container for mineral oils - open

Seam for inserting the bracing frame, art.no. 56973.

Dim. (bottom area x height): 1800x1800x900 mm
Weight: 16 kg

.....**56956**

Bracing frame

Brass pipes, for foldable container, art.no. 56956.

Weight: 13 kg
.....**56973**

3000 I foldable container - open*

Self-erecting, at the top with foam filled floating bulge. With marked packing bag.

Weight: 9 kg
.....**65119**

Foldable containers - closed

On the opposite short sides with flange with threaded connection DN 50 with blank cap and chain, incl. stainless steel screws. At the top with shut-off venting valve. Incl. marked packing bag.

3000 I foldable container*

Weight: 25 kg
.....**65114**

1000 I foldable container*

Weight: 20 kg
.....**65102**

Responder bag for 3000 I foldable container*

Made of Kappler's patented multi-layer film foil material with very high resistance to chemicals.

Bottom area: 2080x2080 mm
Height: 1300 mm
.....**65029**

Responder tarpaulin*

Made of Kappler's patented multi-layer film foil material with very high resistance to chemicals.

Every 50 cm an eyelet of Ø 12 mm

Dim. (LxW): 4200x3850 mm
Weight: 2.2 kg
.....**65026**

Dim. (LxW): 6000x6000 mm
Weight: 4.7 kg
.....**65027**



Plastic foil

Polyethylene, 0.2 mm strong, for collecting of liquids, temporary storage of oil soaked soil, protecting furnitures from water damages etc.

Dim. of roll (LxW): 25x4 m, folded width 1 m
.....**98952**

Tarpaulin*

PE, 0.2 mm strong, with cord.
Dim. (LxW): 4x4 m
Weight: 2 kg
.....**65101**

Tarpaulin*

PE, 0.2 mm strong.
Dim. (LxW): 3x3 m
Weight: 1.7 kg
.....**98955**

Rubber cord with snap closure*

for PE tarpaulin
.....**98956**

Tarpaulin*

Perbunan, with reinforced edge and eyelets, with inserted perlon rope of Ø 5 mm. In packing bag.

Dim. (LxW): 4x4 m
Weight: 25 kg
.....**65095**

Collecting containers - open

TREVIRA® high tensile fabric, PVC-coated on both sides. Absolutely resistant to mineral oils and many chemicals. Welded webs.

Tensile strength: 3000 N/5 cm
Weight of fabric: 1100 g/m²

Collecting containers - self-erecting by means of foam filled floating bulge

1500 I container - self-erecting*

Dim. (ØxH): 1700x900 mm
Weight: 13 kg
.....**56920**

Packing bag for art.no. 56920*

.....**55244**

3000 I container - self-erecting*

Dim. (ØxH): 2250x1000 mm
Weight: 25 kg
.....**56919**

Packing bag for art.no. 56919*

.....**55245**

Collecting containers - closed

with each one size C coupling with size C blank cap on the front side and at the top as fill, drain and vent opening. With extra protection around the armatures. It is advisable to connect a shut-off valve on the front side.

Option: Container with manhole cover for inside cleaning and inspection.

1500 I container - closed*

Dim. filled (LxWxH): 2450x1500x800 mm
Weight: 14 kg
.....**56929**

Packing bag for art.no. 56929*

.....**55246**

* = not illustrated



EQUIPMENT FOR COLLECTION AND STORING LARGE-VOLUME COLLECTING CONTAINERS

3000 l container - closed*

Dim. filled (LxWxH):
2450x2450x800 mm
Weight: 25 kg

.....56928

Packing bag for art.no. 56928*

.....55247

5000 l container - closed*

Dim. filled (LxWxH):
2450x3400x900 mm
Weight: 35 kg

.....56927

Packing bag for art.no. 56927*

.....55248

Manhole cover*

Aluminium, for upper side of container
with size C coupling and size C blank
cap of brass

.....56940

Shut-off valve*

Gunmetal, on both sides with size C
coupling of brass

.....41683

Large-volume collecting containers made of TREVIRA® high tensile fabric, PVC-coated on both sides

Resistant to mineral oil, limited
resistance to chemicals. The webs
are high-frequency welded.
Tensile strength: 4500 N/5 cm
Weight of material: 1100 g/m²

5000 l container - self-erecting

Dim. (ØxH): 2750x1000 mm
Weight: 23 kg

.....56930

10000 l container - self-erecting*

Dim. (ØxH): 3700x1000 mm
Weight: 33 kg

.....56931

15000 l container - self-erecting*

Dim. (ØxH): 4750x1000 mm
Weight: 45 kg

.....56932

35000 l container - self-erecting*

Dim. (ØxH): 6750x1000 mm
Weight: 80 kg

.....56933



Collecting containers - closed

with two size B couplings, on one side
with blank cap, on the other side with
aluminium anodized ball valve,
1 venting valve 3/4" as well as
4 heavy-duty loops at the container
corners. Incl. packing bag.

20000 l container - closed

Dim. (WxHxD):
5100x3600x1200 mm
Weight: 59 kg

.....56944

30000 l container - closed*

Dim. (WxHxD):
5300x4700x1400 mm
Weight: 78 kg

.....56945

50000 l container - closed*

Dim. (WxHxD):
8200x4700x1400 mm
Weight: 114 kg

.....56946

Large-volume collecting containers made of TREVIRA® high tensile fabric, ALCRYN-coated on both sides

with high-frequency welded webs.
ALCRYN is a thermoplastic polymer
with increased resistance to chemicals
and oils.

Tensile strength: 3000 N/5 cm
Weight of material: 1300 g/m²

Collecting containers - self-erecting

by means of foam filled floating bulge
Ø 100 mm, with a fill and drain
connection NW 75 of stainless steel
1.4301 with size B coupling and blank
cap with ball valve of stainless steel
1.4301. Incl. packing bag.

5000 l container - self-erecting*

Dim. (ØxH): 2750x1000 mm
Weight: 29 kg

.....56934

10000 l container - self-erecting*

Dim. (ØxH): 3700x1000 mm
Weight: 42 kg

.....56935

15000 l container - self-erecting*

Dim. (ØxH): 4750x1000 mm
Weight: 57 kg

.....56936

35000 l container - self-erecting*

Dim. (ØxH): 6750x1000 mm
Weight: 102 kg

.....56943

Collecting containers - closed

with two size B couplings of stainless
steel 1.4301, on one side with blank
cap, on the other side with ball valve
of stainless steel 1.4301,
1 vent valve 3/4" as well as
4 heavy-duty loops at the corners of
the container. Incl. packing bag.

20000 l container - closed*

Dim. (WxHxD):
5100x3700x1200 mm
Weight: 70 kg

.....56947

30000 l container - closed*

Dim. (WxHxD):
6000x4900x1200 mm
Weight: 105 kg

.....56948



Collecting containers - self-erecting

by means of foam filled floating bulge
Ø 100 mm, with a fill and drain
connection NW 75, with aluminium
anodized clamping flange, size B
anodized coupling and blank cap,
incl. ball valve and packing bag

Some articles may not be available in
specific countries. Details on request.

* = not illustrated

FLEXIBLE COLLECTING TUBS AND EQUIPMENT



50000 l container - closed*

Dim. (WxHxD):

8000x5900x1200 mm

Weight: 161 kg

.....56949

ALCRYN liquid collecting tubs

Self-rolling, one-man operation.

Suitable for use in case of leaks in tank trucks and containers or as decontamination tub etc.

With a surrounding air body of 220 mm Ø, 3/8" compressed air connection, excess pressure valve and 3/4" venting connection.

Incl. packing bag.

Material: TREVIRA® high tensile fabric, **ALCRYN**-coated on both sides, with a tensile strength of 3000 N/5 cm, high-frequency welded.

Weight of material: 1300 g/m²

Collecting tub 2000x3000 mm*

Volume: 1200 l.

Weight: 18.2 kg

.....56950

Collecting tub 3000x4000 mm*

Volume: 2400 l.

Weight: 31 kg

.....56951

Collecting tub 5000x5000 mm*

Volume: 5000 l.

Weight: 60 kg

.....56952

Double-stroke pump*

for filling of the above tubs

.....63944

Further sizes on request.

Resistance lists for the materials mentioned above are available on request.

Equipment for collecting of hazardous material

The Federal Institute for Physics and Technology in Braunschweig has determined that aluminium cannot be considered completely non-sparking. For this reason we now offer common articles also in stainless steel and armatures such as quick action shut-off valves and suction stainers are available in brass.



Oil and acid scoop

Glass fibre reinforced polyester, flat, with handle, suitable for removing very shallow liquid puddles.

Dim. (LxW): 310x330 mm

Weight: 0.9 kg

.....56862

Mineral oil collecting box

Stainless steel, with welded pipe of 600 mm, with size C coupling of brass, with grounding connection.

Dim. of box (LxWxH):

400x400x200 mm

Total length: 1 m

Weight: 8 kg

.....43492

Mineral oil collecting gutter

Soft aluminium, changeable in shape.

Dim. (LxW): 1800x480 mm

Weight: 1.5 kg

.....98831

Haz-mat discharge gutter, 4-part*

Glass fibre reinforced polyester, consisting of 3 gutters each of 1.09 m and a head piece of 1.13 m. Stackable. The parts are connected by means of snap and clamping devices. The gutter has a bottom width of 37 cm and top width incl. rim of 58 cm. Height 12 cm.

Dim. of the four parts when stacked

(WxHxD): 1130x580x130 mm

Total weight: 9.5 kg

.....98842

PE tarpaulin

Largely resistant to alkalis, acids and mineral oils. 0.4 mm strong. With brass eyelets every 50 cm, 2 eyelets at each corner.

Dim. (LxW): 4x4 m

Weight: 3.5 kg

.....98963



Trough

Stainless steel, conical, with two foldable handles 75x105 mm. For transport of hazardous material, but also for heaping of sand, peat litter, saw dust, oil binders etc.

Dim. (LxWxH): 610x410x180 mm

Weight: 8 kg

.....83423

Oil collecting funnel*

Valmex OL-110 fabric with PVC-coating Valmex P 8, resistant to mineral oils.

Funnel opening 750x750 mm, height 600 mm, with attached hose of 5 m, Ø 500 mm. End of hose with size C coupling. Rim of funnel strengthened by means of wire reinforced PVC-cord.

Weight: 3.5 kg

.....56939

Funnel*

Stainless steel 18/8, Ø 250 mm.

Weight: 0.5 kg

.....84166

* = not illustrated



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